

**Improving the Eleventh Grade Students' Speaking
Achievement through Whole Brain Teaching Method at
SMK Farmasi Bina Medika Palembang**



UNDERGRADUATE THESIS

**This thesis was accepted as one of the requirements to get the title of
Sarjana Pendidikan (S. Pd)**

by

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Setelah kami periksa dan diadakan perbaikan-perbaikan seperlunya, maka skripsi berjudul **“IMPROVING THE ELEVENTH GRADE STUDENTS’ SPEAKING ACHIEVEMENT THROUGH WHOLE BRAIN TEACHING METHOD AT SMK FARMASI BINA MEDIKA PALEMBANG”**. Ditulis oleh saudari **Dini Aulia Dwintan** telah dapat diajukan dalam sidang munaqasyah Fakultas Tarbiyah UIN Raden Fatah Palembang.

Demikianlah terima kasih.

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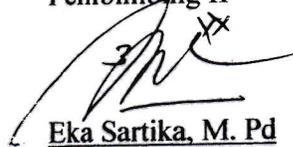
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**IMPROVING THE ELEVENTH GRADE STUDENTS' SPEAKING
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This thesis was written by **Dini Aulia Dwintan**, Student Number 12250032 was defended by the writer in the Final Examination and was approved by the examination committee on December 29th, 2016

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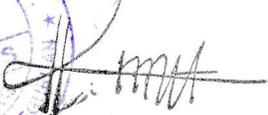
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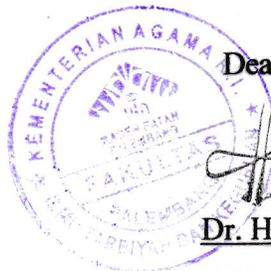

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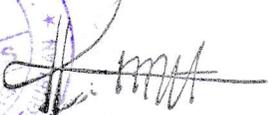
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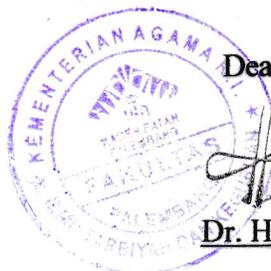


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ABSTRACT

The objectives of this study were to find out: (1) whether or not there was a significant improvement in speaking achievement between before and after the students were taught by using Whole Brain Teaching method, and (2) whether or not there was a significant difference on speaking achievement between the students who were taught by Whole Brain Teaching method and those who were not. The sample of this study was 58 eleventh grade students of SMK Farmasi Bina Medika Palembang, which were divided into control and experimental groups, and each group had 29 students. The technique of selecting the sample was convenience sampling. To collect the data, each group was given a pretest and a post test. The data analyses used paired sample and independent sample t-test. The results of this study showed that (1) that the p-output (Sig. 2 tailed) was 0.000 and t-obtained was 14.376 at the significance level at 0.05 in two tailed testing with $df=28$. It means that there was significant improvement in students' speaking achievement after the students were taught by using Whole Brain Teaching method, and (2) the t-obtained was 3.387 and p-output was 0.01 at the significance level 0.05 in two tailed testing with $df=56$. It means that there was significant difference in students' speaking achievement between who were taught by using Whole Brain Teaching method and those who were. The students who were taught by using WBT method showed better improvement, they were enthusiastic by the implementation of WBT method, they practiced speaking more, and they could remember the lesson easily. In conclusion, teaching speaking through Whole Brain Teaching can improve students' speaking achievement.

Keywords: *Improving, Speaking Achievement, Whole Brain Teaching method*

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CHAPTER I

INTRODUCTION

This chapter presents: (a) background; (b) problems of the study; (c) objectives of the study; (d) significance of the study; (e) hypotheses; and (f) criteria of testing hypotheses.

1. INTRODUCTION

1.1 Background

Communication related to oral and speaking skill is a productive skill in the oral mode. Speaking used when someone wants to communicate with others through message orally. Hughes (2006, p. 144) comments that speaking is the first mode in which children acquire language, it is part of the daily involvement of most people with language activities, and it is the prime motor of language change. It also provides our main data for understanding bilingualism and language contact. Speaking is one way to communicate which ideas and thought delivered through message orally. To enable students to communicate, we need to apply the language in real communication. According to Rickheit and Hans (2008, p. 207), speaking is speech or utterances with the purpose of having intention to be recognized by speaker and the receiver processes the statements in order to recognize their intentions.

Speaking is one of the most important parts in communication. The speaker should communicate in order to transfer the message to the listener. Brown (2004, p. 140) defines speaking as a productive skill that can be directly and empirically observed, those observations are invariably colored by the accuracy and

effectiveness of a test-taker's listening skill, which necessarily compromises the reliability and validity of an oral production test. From those statements above, it can be concluded that speaking is an utterance involving people with language activities to enable the speaker to communicate in order to tell the speaker's intentions.

Nowadays, along with the strengthening position of English as a language for international communication, the teaching of speaking skill has become increasingly important in the English as a second or foreign language (ESL/EFL) context. The teaching of speaking skill is also important due to the large number of students who want to study English in order to be able to use English for communicative purposes. This is apparent in Richards and Renandya (2002, p. 201) publication where they state, "A large percentage of the world's language learners study English in order to develop proficiency in speaking".

The use of English is very needed for the students who are studying in Vocational High School so that the students can compete in international level. Vogt and Kantelinen (2012, p. 62) suggest that an increasingly international working life means that the need for foreign languages, and English in particular, is clear both for vocational and academic students. The goal of Vocational High School is to help students to master the particular skills for their specific working fields and enable them to join the employment market after graduated. Many graduates of vocational expected to plunge into the world of work or even create their own jobs. In order to compete in globalization era, English is used to communicate with people from different countries, while communication places

great emphasis on the speaking capacity. In addition, many jobs require ability in English both passive or active. Having a good English especially for communication becomes a necessary requirement. In this case, it needs to be trained in order to have good English especially in speaking skill. Then, there should be a special course for them to improve their English. Teaching English for the students of Vocational High School is focus on using English for communication. The approach and method are specially formulated to meet the students need. Also, the goal and objectives are set up to achieve the language competence.

As a result, one of the goals of Vocational High School is to improve students' speaking achievement and get them to be ready in their future job position. Thus, both the working and the speaking ability in the curriculum of the Vocational High School are highly stressing, especially for students who are in pharmaceutical major. Therefore, the oral communication capability is needed. That is the students should be able to communicate with people on the daily commercial aspect accurately, fluently and appropriately.

English skills especially speaking is useful for students in pharmacy because there are so many terms in health and drugs using English. The students need it to serve the English language needs of professionals studying and practicing pharmacy. Diaz (2009, p. 2) states that knowing vocabulary words in pharmacy is very important to communicate with professors, fellow students, patients, and co-workers. In pharmacy, lack of good communication skills can lead to misspellings of words and drug names, medication errors, and much more. For pharmacy

students, pharmacy technicians, and practicing pharmacists whose first or best language is not English, assessing patients, counseling patients, and documenting subjective information from patients who sometimes use idiomatic expressions can be challenging. Assessing, counseling, and documenting require a good command of spoken and written language and acceptable pronunciation and listening comprehension skills, as well as a solid knowledge of pharmacy.

In Indonesia, the teaching of English is based on the School-Based Curriculum (KTSP). In reference to this Curriculum proposed by the Department of National Education in 2006, the objective of the English teaching as a compulsory subject at Vocational High School level is to enable students to communicate in both oral and written forms. As the language is a means of communication, students have to be accustomed to speak utterances orally in the classroom even in the very simplest way. Thus, the students need to have a good speaking ability in order to achieve the objectives of English teaching and learning as stated in the current curriculum.

Based on the syllabus for Vocational High School, there will be 146 hours to complete all of the lesson material. Every lesson activity always has assessment, there will be oral test whether it is to make a pair dialog, as talking about hobbies and interests, guest handling and handling complaint, expressing dealing with telephone conversations, telling about people's job using simple present tense and so on. It shows that speaking skills has a big portion in students' activities.

However, speaking is not an easy skill to be mastered because it needs vocabularies, grammar, and a lot of practice. Zhang (2009, p. 91) argues that speaking remains the most difficult skill to master for the majority of English learners, and they are still incompetent in communicating orally in English. According to Ur (In Al-Hosni, 2014 p. 23), there are many factors that cause difficulty in speaking, and they areas follows:

1. Inhibition. Students are worried about making mistakes, fearful of criticism, or simply shy.
2. Nothing to say. Students have no motive to express themselves.
3. Low or uneven participation. Only one participant can talk at a time because of large classes and the tendency of some learners to dominate, while others speak very little or not at all.
4. Mother-tongue use. Learners who share the same mother tongue tend to use it because it is easier and because learners feel less exposed if they are speaking their mother tongue.

Therefore, it can be concluded that some of those factors are related to the learners themselves, the teaching strategies, and the environment. The most difficult aspect of spoken English is that it is always accomplished via interaction with at least one other speaker and this is one reason why many learners were shocked and disappointed when learners used their second or foreign language for the first time in real interaction: They had not been prepared for spontaneous communication and could not cope with all of its simultaneous demands (Segura and Junio, 2011, p. 21).

In addition, Rabab'ah (2005, p. 192) points out that there are many factors that cause difficulties in speaking English among EFL learners. For example, many learners lack the necessary vocabulary to get their meaning across, and consequently, they cannot keep the interaction going. Inadequate strategic competence and communication competence can be another reason as well for not

being able to keep the interaction going.

As a foreign language in Indonesia, many factors that make students have difficulties in speaking English. For example the psychological factors from the students, as stated by Haidara (2014, p. 518), students who had learned English for many years are still confronting some barriers in their English speaking performance, that came to prove the researcher's assumption in the first place. Most of the problems they were complaining were; being anxious, being nervous, being worried of making mistakes, feeling shy, and feeling frustrated while performing in English speaking. The researcher then believed that those problems mentioned above indicate nothing but the psychological factor.

Other problems that Indonesian EFL learners face in developing their speaking performance relate not only to their linguistic and personality factors, but also the types of classroom tasks provided by the teachers (Widiati and Bambang, 2006, p. 280), for example the teaching and learning process usually teacher-centered. Thus, this section suggests that teachers have an important role in fostering learners' ability to speak English well. For this, teachers need to help maintain good relation with EFL learners, to encourage them to use English more often, and to create classroom activities in order to enhance students' interaction. The next section specifically presents reports on types of activities in EFL speaking classroom.

The foreign language students who study speaking English would have different output than students who speak English as their mother tongue, the EFL students should be able to practice it in real situation. According to Oradee (2012,

p. 533) “Learners in an English as a Foreign Language (EFL) context do not use the language in authentic situations.” That phenomenon happens in Indonesia which has already been proved by some researchers. First is the study done by Ghasanie (2015, p. 4) who investigated the students’ speaking skill at SMK Negeri 2 Palembang, she found that the students of SMK Negeri 2 Palembang practically have difficulties in studying English. For example, the students have difficulties to speak up because it is hard for them to express about what they want to say in English and they are not confident enough with their speaking ability. Second, based on Pertiwi’s study (2013, p. 2) on the students at SMK Muhammadiyah 1 Sukoharjo, the students often make errors of English. The students become ashamed, unwilling, and unconfident if they are often making mistakes.

Based on the preliminary research, the researcher has been experienced taught the tenth grade students in SMK Farmasi Bina Medika Palembang for one semester. The researcher found that the students’ ability of speaking skill in SMK Farmasi Bina Medika was still lack. The students sometimes get confused when they hear the teacher speaks in English. Most of the students also can not answer what has been asked by the teacher in English. The students have difficulties to speak up because it was hard for them to express about what they want to say in English and they were not confident enough with their speaking ability. From 20 students, only 20% who got score above the standard score (77) while others got score below 77 in English subject. The students were not accustomed to speak in English in their daily life, they could speak 2 or 3 words and simple sentences in

English but tend to combine it with their mother tongue. It can be concluded that the students' speaking achievement was lack, it can be seen from the students' scores. The students' speaking achievement was still low based on the researcher's observation.

Because of the researcher nature of the world of education, the Whole Brain Teaching Method (WBT) method emerged as an alternative to instruction. This method proposed by Biffle (2010) engages students throughout the whole learning process by activating both brain hemispheres. The author continues to say that WBT method draws on theories and methods (such as Total Physical Response, Cooperative Learning, and Behaviorism), in order to create a method in which both hemispheres can work simultaneously when the essential principles of WBT method -Class-Class, Teach-Ok, Mirror, Hands and eyes, and Scoreboard- are applied in the classroom, taking into account the use of imagination and fun.

The most powerful brain stimulator, movement, is rarely, if ever, used in lecture but frequently used in WBT method. Learning acquired by movement lasts longer than any other kind. Speaking, walking, eating, playing sports, operating cars, computers, cell phones all involve thousands of complex movements. The ease with which which people perform these activities, shows the power of learning acquired by movement. WBT method requires movement, because movement is the brain's most powerful, stimulating learning tool (Biffle, p. 17).

WBT method uses visualization and dramatization in order to develop comprehension. This method is relatively new; and it has been tested in mathematics, social studies, arts, dentistry, and also in kindergarten. The theories,

methods and techniques that support WBT method have been implemented at some point in an isolated way, but WBT method combined them in order to have a successful method to teach young learners, adolescents and adults (Helena, Diana, and Mila, 2012, p. 10). It is supported by Biffle (2009, p. 1) who expressed that WBT is one of the fastest growing, education reform movements in America. It rests upon the principle that teachers at every level share the same difficulties: students lack discipline, background knowledge and fundamental problem solving skills. From kindergarten to college, teachers face students who have difficulty with reading and writing. Nonetheless, our students respond to challenges, enjoy well-designed learning games, and can make, in the proper setting, astonishing educational progress. WBT method uses a very simple and effective approach to overcome this resistance. WBT method injects fun back into the classroom for both teacher and students.

Based on those explanation, the reseacher interested to conduct a research entitled “Improving the Eleventh Grade Students’ Speaking Achievement through Whole Brain Teaching Method at SMK Farmasi Bina Medika Palembang”.

1.2 Problems of the Study

Based on the background above, the problems of this research were formulated as followed:

1. Is there any significant improvement on the eleventh grade students’ speaking achievement who are taught by using WBT method at SMK Farmasi Bina Medika Palembang?

2. Is there any significant difference on the eleventh grade students' speaking achievement between those who are taught by using WBT method and those who are not at SMK Farmasi Bina Medika Palembang?

1.3 Objectives of the Study

From the problems above, the objectives of the study were:

1. To find out if there is significant improvement on the eleventh grade students' speaking achievement who are taught by using WBT method at SMK Farmasi Bina Medika Palembang.
2. To find out if there is significant difference on the eleventh grade students' speaking achievement between those who are taught by using WBT method and those who are not at SMK Farmasi Bina Medika Palembang.

1.4 Significance of the Study

The result of this study hopefully will be useful for the students of SMK Farmasi Bina Medika Palembang to improve their speaking achievement with the view that learning is fun through Whole Brain Teaching. It will also hopefully help the teachers to improve the teaching quality by applying this method as one of efforts to help teachers in decreasing the students' difficulties in practicing their speaking skill in English at SMK Farmasi Bina Medika Palembang. For the researcher, it is expected to add the researcher's knowledge about WBT method and the researcher's experience in conducting an educational research. The researcher also expected to give information for other researchers on how to create an English speaking activity be more interesting. This study is expected to be able to give other researchers sources or references

of the method that can be used for improving or developing students' speaking achievement and also expand the general knowledge, help them as the guidance in developing their research in the same field.

1.5 Hypotheses

The hypotheses of this study were proposed in the forms of null and research hypotheses below:

1. H_0 : there is no significant improvement on the eleventh grade students' speaking achievement who are taught by using WBT method at SMK Farmasi Bina Medika Palembang.

H_a : there is a significant improvement on the eleventh grade students' speaking achievement who are taught by using WBT method at SMK Farmasi Bina Medika Palembang.

2. H_0 : there is no significant difference on the eleventh grade students' speaking achievement between those who are taught by using WBT method and those who are not at SMK Farmasi Bina Medika Palembang.

H_a : there is a significant difference on the eleventh grade students' speaking achievement between those who are taught by using WBT method and those who are not at SMK Farmasi Bina Medika Palembang.

1.6 Criteria of Testing the Hypotheses

In criteria of testing the hypotheses, the result depends on the problems investigated. To test the hypotheses, the researcher used the 95% level of significant (0.05) at two-tailed test. To prove the research problems, the researcher's hypotheses were determined based on the following criteria:

1. If the p-output (Sig.2-tailed) is lower than 0.05 and t-obtained is higher than t-table (2.048), the alternative hypothesis (H_a) is accepted, and the null hypothesis (H_0) is rejected.
 - If the p-output (Sig.2-tailed) is higher than 0.05 and t-obtained is lower than t-table (2.048), the alternative hypothesis (H_a) is rejected, and the null hypothesis (H_0) is accepted.
2. If the p-output (Sig.2-tailed) is lower than 0.05 and t-obtained is higher than t-table (2.000), the alternative hypothesis (H_a) is accepted, and the null hypothesis (H_0) is rejected.
 - If the p-output (Sig.2-tailed) is higher than 0.05 and t-obtained is lower than t-table (2.000), the alternative hypothesis (H_a) is rejected, and the null hypothesis (H_0) is accepted.

CHAPTER II

LITERATURE REVIEW

This chapter presents: (a) theoretical description and (b) previous related studies.

2. LITERATURE REVIEW

2.1 The Nature of Speaking

There are many definitions of speaking that have been proposed by some experts in language learning. Brown (2001, p. 267) cites that when someone can speak a language it means that he can carry on a conversation reasonably competently. In addition, he states that the benchmark of successful acquisition of language is almost always the demonstration of an ability to accomplish pragmatic goals through an interactive discourse with other language speakers. Richards and Renandya (2002, p. 204) state that effective oral communication requires the ability to use the language appropriately in social interactions that involves not only verbal communication but also paralinguistic elements of speech such as pitch, stress, and intonation.

Moreover, nonlinguistic elements such as gestures, body language, and expressions are needed in conveying messages directly without any accompanying speech. Brown (2007, p. 237) comments that social contact in interactive language functions is a key importance and in which it is not what you say that counts but how you say it what you convey with body language, gestures, eye contact, physical distance and other nonverbal messages. It can be

concluded that speaking is a productive skill that communicate the conversation and it can be done not only orally but also by body language.

It is important that everything we want to say is conveyed in an effective way, because speaking is not only producing sounds but also a process of achieving goals that involves transferring messages across. To support those definitions of speaking, there are the micro skills of oral communication from Brown (2001, p. 271) :

1. Produce chunks of language of different lengths.
2. Orally produce differences among the English phonemes and allophonic variants.
3. Produce English, stress patterns, words in stressed and unstressed positions, rhythmic structure, and intonational contours.
4. Produce reduced forms of words and phrases.
5. Use an adequate number of lexical units (words) in order to accomplish pragmatic purposes.
6. Produce fluent speech at different rates of delivery.
7. Monitor your own oral production and use various strategic devices-pauses, fillers, self-corrections, hack tracking-to enhance the clarity of the message.
8. Use grammatical word classes (nouns, verbs, etc), systems (e.g., tense, agreement, pluralization), word order, patterns, rules, and elliptical forms.
9. Produce speech in natural constituent–in appropriate phrases, pause groups, breath groups, and sentences.
10. Express a particular meaning in different grammatical forms.

11. Use cohesive devices in spoken discourse.
12. Accomplish appropriately communicative functions according to situations, participants, and goals.
13. Use appropriate registers, implicature, pragmatics conventions, and other sociolinguistics features in face-to-face conversations.
14. Convey links and connections between events and communicate such relations as main idea, supporting idea, new information, given information, generalization, and exemplification.
15. Use facial features, kinetics, body language, and other nonverbal cues along with verbal language to convey meanings.
16. Develop and use a battery of speaking strategies, such as emphasizing key words, rephrasing, providing a context for interpreting the meaning of words and appealing for help.

2.2 The Concept of Speaking

Speaking is one of the four language skills (reading, writing, listening and speaking). It is the means through which learners can communicate with others to achieve certain goals or to express their opinions, intentions, hopes and view points. In addition, people who know a language are referred to as 'speakers' of that language. Furthermore, in almost any setting, speaking is the most frequently used language skill. As Rivers (1981) argues, speaking is used twice as much as reading and writing in our communication.

Speaking has usually been compared to writing, both being considered "productive skills", as opposed to the "receptive skills" of reading and listening.

Speaking also is closely related to listening as two interrelated ways of accomplishing communication. Every speaker is simultaneously a listener and every listener is at least potentially a speaker (Oprandy, 1994 p. 153 & El Menoufy, 1997, p. 9). Speaking has been classified to monologue and dialogue. The former focuses on giving an interrupted oral presentation and the latter on interacting with other speakers (Nunan, 1989, p. 27).

Actually, it was assumed that the interactional nature of spoken language requires the speaker's ability to use motor-perceptive skills, which are concerned with correctly using the sounds and structures of the language, and interactional skills, which involve using the previous skills for the purposes of communication. This means that EFL students should acquire the knowledge of how native speakers use language in the context of structured interpersonal exchanges in which many factors interact (Bygate, 1987 & Brown, 2001). In addition, speaking requires that learners understand when, why, and in what ways to produce language (sociolinguistic competence) (Cohen, 1996 and Harmer, 2001, p. 269-270). A good speaker hence synthesizes this array of skills and knowledge to succeed in a given speech act. Florez (1999) highlights the following skills underlying speaking:

- a. Using grammar structures accurately;
- b. Assessing characteristics of the target audience, including shared knowledge, status and power relations, or differences in perspectives;

- c. Selecting vocabulary that is understandable and appropriate for the audience, the topic being discussed, and the setting in which the speech act occurs;
- d. Applying strategies to enhance comprehensibility, such as emphasizing key words, rephrasing, or checking for listener's comprehension;
- e. Paying attention to the success of the interaction and adjusting components of speech such as vocabulary, rate of speech, and complexity of grammar structures to maximize listener's comprehension and involvement.

A careful examination of all previously mentioned speaking skills emphasizes that speaking is a high complex mental activity which differs from other activities because it requires much greater effort of the central nervous system (Bygate, 1998, p. 23). It includes sub processes and involves distinct areas of planning. First the speaker has to retrieve words and phrases from memory and assembles them into syntactically and propositionally appropriate sequence (Harmer, 2001, p. 269-270). Speaking also happens in the context of limited processing capacities due to limitations of working memory, and thus a consequent need for routinization or automation in each area of production arises. This means that the speaker should process the information he listens to the moment he gets it. Besides, speaking involves a sort of monitoring during and following speech production and the managing of communication under a range of external pressures (Bygate, 1998, p. 23 & Basturkmen, 2002, p. 28). Taking into consideration the current view of speaking as a complex skill and a

multi-facets cognitive process, it is important then to consider more closely the features of effective instruction that can facilitate the acquisition of these skills and processes by SL/FL learners. Oprandy (1994) and Nunan (1999) propose that effective instruction should be characterized by the following:

- a) The whole should be more important than the parts. This means that both synthetic and analytical procedures used to teach speaking should share a common concern with the whole rather than the parts.
- b) Instruction should enable learners to reflect on their own as well as on others' processes and strategies in an active way.
- c) There should be ample opportunities for interacting to expand the repertoire of experiences with the target language with its various ideational, interpersonal and textual functions for which speech is used.
- d) There should be opportunities for learners to practice both linguistic and communicative competencies.

However, despite the importance of developing speaking skills among ESL/EFL learners, instruction of these speaking skills has received the least attention, and many English teachers still spend the majority of class time in reading and writing practice almost ignoring speaking skills (El Menoufy, 1997, p. 12 and Miller, 2001, p. 25).

2.3 The Elements of Speaking

Speaking is a complex skill requiring the simultaneous use of a number of different abilities, which often develop at the different rates. According to

Heaton, 1990, p. 70-71), either four of five components are generally recognized in analyzing the speech process:

- a. Pronunciation (including the segmental features-vowels and consonants and the stress and intonation patterns).

As stated by Harmer (2007, p. 343), if students want to be able to speak fluently in English, they need to be able to pronounce the phonemes correctly, use the appropriate stress and intonation patterns and speak in connected speech.

- b. Grammar

Bygate (1997, p. 3) states that it is obvious that in order to be able to speak foreign language, it is necessary to know a certain amount of grammar and vocabulary.

- c. Vocabulary

As we know, vocabulary is the basic element in a language. Folse (2004, p. 2) comments that vocabulary is single words, set phrases, variable phrases, phrasal verbs, and idioms

- d. Fluency

In simple terms, fluency is the ability to talk freely without too much stopping or hesitating (Riddell, 2001, p. 118). Meanwhile, according to Gower, Diane, and Steve (1995, p. 100), fluency can be thought of as the ability to keep going when speaking spontaneously.

e. Comprehension

The last speaking element is speaking comprehension. Comprehension is discussed by both speakers because comprehension can make people get the information they want. Comprehension is defined as the ability to understand something by a reasonable comprehension of the subject or as the knowledge of what a situation is really like.

2.4 Types of Speaking Performances

Speaking is a productive skill that can be directly and empirically observed, those observations are invariably colored by the accuracy and effectiveness of a test-takers listening skill, which necessarily compromises the reliability and validity of an oral production test. Brown (2004, p. 140) describes six categories of speaking skill area. Those six categories are as follows:

a. Imitative

This category includes the ability to practice an intonation and focusing on some particular elements of language form. That is just imitating a word, phrase or sentence. The important thing here is focusing on pronunciation. The teacher uses drilling in the teaching learning process. The reason is by using drilling, the students get opportunity to listen and to orally repeat some words.

b. Intensive

This is the students speaking performance that is practicing some phonological and grammatical aspects of language. It usually places students doing the task in pairs (group work), for example, reading aloud that includes

reading paragraph, reading dialogue with partner in turn, reading the instructions, etc.

c. Responsive

Responsive performance includes interaction and test comprehension but at the somewhat limited level of very short conversation, standard greeting and small talk, simple request and comments. This is a kind of short replies to teacher or student-initiated questions or comments, giving instructions and directions. Those replies are usually sufficient and meaningful.

d. Transactional (dialogue)

It is carried out for the purpose of conveying or exchanging specific information.

e. Interpersonal (dialogue)

It is carried out more for the purpose of maintaining social relationships than for the transmission of facts and information. The forms of interpersonal speaking performance are interview, role play, discussions, conversations and games.

f. Extensive (monologue)

Teacher gives students extended monologues in the form of oral reports, summaries, and story telling and short speeches.

Based on the theory above, it can be concluded that there are some points that should be considered in assessing speaking. The students need to know at least the pronunciation, vocabularies, and language functions that they are

going to use. When the students have been ready and prepared for the activity, they can use the language appropriately.

2.5 Classroom Speaking Activities

Teaching speaking should be taught through attractive and communicative activities. There are many types of classroom speaking activities. Harmer (2001, p. 348-352) states six classroom speaking activities. They are acting from scripts, communication games, discussion, prepared talks, questionnaires, simulation, and role play.

a. Acting from script

Playing scripts and acting out the dialogues are two kinds of acting scripts activities that should be considered by the teacher in the teaching and learning process. In the playing scripts, it is important for the students to teach it as real acting. The role of the teacher in this activity is as a theatre director who draws attention to appropriate stress, intonation, and speed. This means that the lines they speak will have real meaning. By giving students practice in these things before they give their final performances, the teacher ensures that acting out is both a learning and language producing activity. In acting the dialogue, the students will be very helped if they are given time to rehearse their dialogues before the performance. The students will gain much more from the whole experience in the process.

b. Communication games

Games are designed to provoke communication among students. The games are made based on the principle of the information gap so that one

student has to talk to his/her partner in order to solve a puzzle, draw a picture, put a thing in the right order, or find similarities and differences between pictures. Television and radio games, imported into the classroom, often provide good fluency activities.

c. Discussion

Discussion is probably the most commonly used activity in the oral skills class. Here, the students are allowed to express their real opinions. According to Harmer (2001, p. 272) discussion range is divided into several stages from highly formal interactions, whole-group staged events to informal small-group interactions.

The first is the buzz groups that can be used for a whole range of discussion. For example, the students are expected to predict the content of a reading text, or talk about their reactions after reading the text.

The second is giving instant comment which can train the students to respond fluently and immediately. This involves showing them photographs or introducing topics at any stage of a lesson and nominating students to say the first thing that comes into their mind.

The last was formal debate. The students are asked to prepare arguments in favor or against various propositions. The debate will be started when those who are appointed as 'panel speaker' produce well-rehearsed 'writing like' arguments whereas others, the audience, pitch in as the debate progresses with their own thoughts on the subject.

d. Prepared talks

The students are asked to make a presentation on a topic of their own choice. Such talks are not designed for informal spontaneous conversations because they are prepared and more 'writing like'. However, if it is possible, the students should speak from notes rather than from a script.

e. Questionnaires

Questionnaires are very useful because they ensure that both the questionnaire and respondent have something to say to each other. Students can design questionnaires on any topic that is appropriate. As they do so the teacher can act as a resource, who helps them in the design process.

f. Simulation and Role play

Simulation and role play can be used to encourage general oral fluency, or train the students for specific situations. Students can act out simulation as them or take on the role of completely different character and express thoughts and feelings as they doing in the real world.

Those activities can be used by teachers to teach speaking. The teachers can choose an activity that is related to the topic and objective of the lesson. Besides, they must consider the situation, condition of the students and materials that will be taught. For example, they use simulation and role play activities when they teach expressions. The teachers can ask them to write some dialogues and after that they have to act them out in front of the class. It may be used by the teachers in using acting from script. In discussion, the teachers can use some pictures or maybe videos in a certain situation. These

activities can be used as the way to measure how far students can speak, say and express their feeling in English.

2.6 Teaching Speaking

Teaching is a process of giving guidance to the students to reach the goals. Teaching is also known as “instruction”. Teaching is an interactive activity between the teacher and students involving class room talk.

Brown (2001, p. 267) cites that when someone can speak a language it means that he can carry on a conversation reasonably and competently. In addition, he states that the benchmark of successful acquisition of language is always demonstrated of an ability to accomplish pragmatic goals through an interactive discourse with other language speakers.

From a communicative purpose, speaking is closely related to listening. The interaction between these two skills is shown in a conversation. Brown (2001, p. 275-276) states that there are seven principles for designing speaking techniques.

- a. Use techniques that cover the spectrum of learner needs, from language-based focus on accuracy to message-based on interaction, meaning, and fluency.
- b. Provide intrinsically motivating techniques.
- c. Encourage the use of authentic language in meaningful contexts.
- d. Provide appropriate feedback and correction.
- e. Capitalize on the natural link between speaking and listening.
- f. Give students opportunities to initiate oral communication.
- g. Encourage the development of speaking strategies.

According to Nunan (2003, p. 54-55), there are some principles for teaching speaking. Some of which are explained as follows;

1. Give students practice with both fluency and accuracy

At the beginning and intermediate level of studies, learners must be given opportunities to improve their fluency as well as accuracy. Accuracy means using the target language correctly and fluency is using language quickly and confidently. The teacher should not emphasize on any one aspect of speaking. Rather, students should get practice on both accuracy and fluency.

2. Use group work or pair work

To improve students' speaking, they should be given enough opportunities to speak in class. So, teacher talk time should be less and student talk time should be more. It is important for language teachers do not take up all the time. Pair work and group work can be used to increase the amount of time that learners get to speak in the target language during the lesson. In this way, the students will get chance to interact and practice the language with other students.

According to Thornbury (2007, p. 40), the process of developing speaking skill consists of three stages:

1. awareness – learners are made aware of features of target language knowledge,
2. appropriation – these features are integrated into their existing knowledge-base,

3. autonomy – learners develop the capacity to mobilize these features under real-time conditions without assistance.

2.7 The Concept of Whole Brain Teaching Method

Teaching English to learners as a foreign language has been a task which has evolved throughout time due to the contribution of authors who have developed theories according to different views in order to reach the goal of engaging learners into the learning process. One of the methods that is based on teaching EFL learners is Whole Brain Teaching (WBT) proposed by Biffle (2010).

Chris Biffle established whole brain teaching (WBT) in 1999 after 25 years of experience in the classroom (Biffle, 2010). Observation of student behavior in the community college setting led him to believe that the lecture model was problematic as the more he lectured, the more disengaged students became. As a result of this observation, and collaborative work with teachers to develop strategies to improve learning in the classroom, WBT emerged as a grassroots educational reform movement (Biffle, 2010). Reportedly based on brain research, WBT method is composed of seven core teaching techniques referred to as the Big Seven. The director of WBT method claim that teacher use of the techniques improve student academic achievement and self-efficacy (Biffle, 2010). He asserts that “Whole Brain Teaching (WBT) method is a set of strategies that combines the best attributes of Direct Instruction and Cooperative Learning to create an engaging classroom environment for students and an enjoyable workday for teachers (2010, p. 230-231). This is how, through a guided range of activities learners are able to experience an innovative and

updated class that goes beyond traditional classes. The author continues to say that this method has developed its groundings during the past four decades, and has its basis on different methods, techniques and theories that belong to WBT method, such as: Cooperative Learning (CL) by Johnson & Johnson (1960), Total Physical Response (TPR) by Asher (1970), Repetition by Thornbury (1997), Behaviorism by Watson (1913), and Direct Instruction Method (DI) by Kousar (2009). These methods, techniques and theories have been the support of WBT method which impacted teaching scenarios positively.

2.8 The Brain in Whole Brain Teaching

In order to understand an overview of WBT method, we have to know the model of human brain. Brain is the most complex organism in the universe, weighing about 3 pounds contains about 100 billion neurons, brain cells transmit information and the total length of human brain's nerve fibers is over 94,000 miles. There are left hemisphere and the right hemisphere in human brain.

The prefrontal cortex, occupying about 30 percent of the brain in humans, is indispensable for rational, directed activity. Parts of the prefrontal cortex are responsible for directing and maintaining attention, keeping ideas in mind while distractions bombard human from the outside world, and developing plans and acting on them. The prefrontal cortex is critical for interpreting social cues and behaving in a socially appropriate manner. The underside and middle surfaces of the prefrontal cortex govern many interpersonal and emotional behaviors. There is also a motor cortex, the brain's most reliable memory area. Beside that, there are visual cortex at the rear of human brain. They occupy such a substantial area

that some scientists call the brain the “seeing brain”. The visual cortex is one of the brain’s most trustworthy memory areas. Human remembers faces much better than names because information about how people look is stored in human visual cortex. In human’s left hemisphere. There is Broca’s area, crucial in speaking. Toward the back of Broca’s area is Wernicke’s area, it is important in hearing and understanding language.

As a result, we can know how these brain areas work together. For example, if someone reading aloud from a book, the information passes his visual cortex (seeing), to Wernicke’s area (language understanding), to Broca’s area (speaking) and finally to the motor cortex to activate his lips, tongue and vocal chords. If he then decide to stop reading and eat a banana, the prefrontal cortex works in decision making. Limbic system is the center of human emotions. If human likes or dislikes something, the limbic system is involved. Because in limbic system, the emotions take control of the prefrontal cortex.

Here is an overview of WBT’s learning strategies which called as the big seven with relevant brain information attached;

1. Class-Yes

It activates the prefrontal cortex, the brain’s boss. The prefrontal cortex controls decision making, planning and focus of attention. Little if any learning can take place if the prefrontal cortex is not engaged. Think of the Class-Yes as a brain switch that readies students for instruction (Biffle, 2010, p. 23).

2. Teach-Okay

Brain and learning research indicates that students learn the most when they are involved in teaching each other. By emphasizing energetic, instructional gesturing we engage, during Teach-Okay sessions, five of students' brain areas: visual cortex (seeing gestures), motor cortex (making gestures), broca's area (verbalizing a lesson), wernicke's area (hearing a lesson), and the limbic system (giving emotional content to a lesson).

A key component of our Teach-Okay method is that teacher must speak briefly, often not more than 30 seconds, before asking students to rehearse the lesson with each other. The longer teachers talk, the more students teacher lose. Conversely, the more students repeat lessons to each other, especially while using descriptive gestures, the more students are engaged and the more thoroughly lessons are embedded in long term memory (Biffle, 2010, p. 23-24).

3. The Five Classroom Rules

The classroom rules not only efficiently activate five areas of every student's brain (visual cortex, motor cortex, Broca's area, Wernicke's area, and limbic system) but also, because they are frequently rehearsed, involve the brain's mirror neurons. Orderly behavior creates the mirroring of orderly behavior which causes teachers and students to mirror each other's happy faces (Biffle, 2010, p. 24).

4. The Scoreboard

Scoreboard is the fastest, most entertaining and, for limited teaching budgets, the cheapest motivational system in elementary education. Wired directly into the brain's emotional center, the limbic system, the Scoreboard replaces marbles in a jar, candy, table points, play money and other classroom reward strategies. When an instructor marks a smiley or a frowny on the scoreboard, students feel a small, positive or negative, emotional jolt. By enlivening the marking routine with a "mighty oh yeah" or a "mighty groan" the reward circuitry in the limbic system is activated (Biffle, 2010, p. 24).

5. Hands and Eyes

As employed by

an experienced WBT instructor, Hands and Eyes creates instant silence, eliminating all learning distractions; the prefrontal cortex takes control of brain activity focusing the visual cortex and the auditory cortex on the instructor's lesson (Biffle, 2010, p. 24).

6. Switch

In terms of brain structure, classes are often divided between those who are Brocaians (speakers) and Wernikites (listeners). By using Switch, an instructor can easily teach listening skills to the speakers and speaking skills to the listeners (Biffle, 2010, p. 24).

7. Mirror

Many brain scientists believe that people learn by mirroring the gestures and activities of others. They have identified mirror neurons scattered throughout the

brain that are activated by mimicking the behavior they observe. Our own experience in WBT classrooms indicates that when a class mirrors teacher's gestures and, when appropriate, repeats teacher's words, a powerful learning bond is created as the teacher and students' visual and motor cortex engage each other (Biffle, 2010, p. 24).

2.9 The Advantages of Whole Brain Teaching Method

According to Battle, he convinced that WBT method is a method designed toward maximizing student engagement, and focusing on the way the brain is really designed to learn. It is an integrated method combining effective classroom management and pedagogically sound approaches to student engagement that are effective with a wide range of student learning populations. Whole brain teaching is considered a best practice, because this method of teaching seeks to empower students as learners. In most classrooms nation and worldwide, teaching remains direct instruction by a teacher who is 'more knowledgeable' transferring knowledge through lectures and worksheets all leading to a test. However, whole brain teaching attempts to break away from this norm and allow students to become the 'more knowledgeable ones' in control of teaching, while also taking attention away from tests and focusing on daily activities. Although there is no agreed upon definition for a best practice, many organizations agree that a best practice is a research driven method which demonstrates success and can be replicated.

2. 10 The Teaching Procedures of Whole Brain Teaching

There are some WBT procedures contained several techniques used in teaching and learning process which called as big seven;

1. Class-Yes!

In order to gain students attention, the teacher in a novel tone of voice and says, “Class!” Students respond by saying, “Yes!” in the same tone and pattern of speech used by the teacher (Biffle, 2010, p. 27).

2. Classroom Rules

WBT utilized five classroom rules that are rehearse daily. Each rule coresponded to its own gesture. The classroom rules are as follows:

Rule #1: follow directions quickly

Rule #2: raise your hand for permission to speak

Rule #3: raise your hand for permission to leave your seat

Rule #4: make smart choices

Rule #5: keep your dear teacher happy

If a student in the classroom break the rule, the teacher, without drawing attention to the individual announce to the class the number rule that is broken. This is a cue for the students to gesture and verbalize the rule aloud as a class (Biffle, 2010, p. 31).

3. Teach/Okay

Once the teacher gain the students attention, the teacher engages in direct verbal instruction using gestures to represent lesson concepts. After approximately 30 seconds to 1 minute, the teacher prompts a classroom

ritual by clapping several times (changes each time) and saying, “Teach” to the students, again in a novel tone of voice. The students then responded with “Okay!” matching the teachers clapping pattern and tone of voice. Students then turn to a predesignated peer partner and one student teach what they just learned from the teacher using verbalizations and gestures (Biffle, 2010, p. 44).

4. The Scoreboard

To support attention and motivation in the classroom the teacher creates a scoreboard with a happy face on one side to represent the students and a sad face on the other side to represent the teacher. Off task behavior observed in the classroom is addressed with a mark on the teacher side and vice versa for on task behavior. If students earn more points by the end of the day then they are allowed to participate in a reinforcing activity, such as free time at the end of a lesson.

When the teacher wins, reinforcement is withheld. When marks make students are prompted with a point of a finger to clap their hands once and exclaim, “Oh yeah!” for student marks or “Awww!” for teacher marks (Biffle, 2010, p. 62).

5. Mirror

A key aspect of teaching in the WBT classroom is the use of gestures. Gestures are created to represent various concepts in the curriculum to facilitate retention of the material. In teaching the gestures, the teacher

says, “Mirror!”. Students respond with, “Mirror!” and model the gestures as the teacher speaks (Biffle, 2010, p. 77).

6. Hands and Eyes

When critical aspects of the lesson are presented, the teacher says, “Hands and eyes” in the usual novel tone of voice to gain student attention. Students responded by immediately folding their hands and looking at the teacher (Biffle, 2010, p. 77).

7. Switch

Students are assigned peer partners that they turn to after the “Teach!” command. The students alternated between listening to and mirroring their peers gestures and teaching. The teacher says, “Switch!” in a novel tone of voice. Students respond, “Okay!” and then gesture their hand up in the air to pull down an imaginary switch. This prompted students to change roles with their partner (Biffle, 2010, p. 55).

2. 11 Previous Related Studies

There are several previous studies that considered closely to the researcher’s study. The first study was entitled “The English Vocabulary Mastery of the Fifth Grade Students of SDN 3 Telukwetan Jepara in the Academic Year 2013/2014 taught by Using Whole Brain Teaching (WBT)” written by Cahya (2013). The objective of the research is to find out whether there was a significant difference between the English vocabulary mastery of the Fifth Grade Students of SDN 3 Telukwetan Jepara in the academic year 2013/2014 before and after being taught by using WBT method. The result of the study showed that there was a significant

difference between the English vocabulary mastery of the fifth grade students of SDN 3 Telukwetan Jepara in the academic year 2013/2014 before and after being taught by using whole brain teaching (WBT). The similarity between her study with the researcher's study is in independent by using whole brain teaching. However, the difference is in the population of the study. In the researcher's study, the population of this study is eleventh grade students at SMK Farmasi Bina Medika Palembang while in Cahya's study is fifth grade students of SDN 3 Telukwetan Jepara.

The second study entitled "Penerapan Metode Whole Brain Teaching dengan Pendekatan Active Learning pada Pembelajaran Fisika di SMP Negeri 11 Jember" by Nurvianti (2013). The purpose of this study were (1) to examine differences in students' learning outcomes using the whole brain teaching with active learning approach with conventional learning; (2) to know how far the students' learning activity use the WBT method with active learning approach in learning physics. The results of the study were (1) there was a significant difference between physics students' learning outcomes in physics using whole brain teaching method with active learning approach with conventional learning; (2) the average of the experiment students' learning outcomes using the WBT method with active learning approach was in the active category in the amount of 72.9 %. The similarity between her study with the researcher's study is in independent by using WBT method. However, the difference is in the population of the study. In the researcher's study, the population of this study is eleventh grade students at

SMK Farmasi Bina Medika Palembang while in Nurvianti's study is eighth grade students at SMP Negeri 11 Jember.

The third study entitled "Teaching Speaking Ability Using Whole Brain Teaching Method at Junior Level (Young Learners) Students of 'Speak Up' English Course in Bandung" done by Nurhasanah (2013). The objectives of the study were to find out whether or not teaching speaking ability using WBT method was effective to improve students' speaking ability and to find out the students' response toward teaching speaking ability using WBT method. The results of the study were teaching speaking ability using WBT method was effective to improve the students' speaking ability and 93% of students agree that they like the use of WBT method in the instructional process. The similarities between her study with the researcher's study is in independent and dependent, the independent variable was WBT method and the dependent variable was about speaking, but the difference was the population of the study. In Nurhasanah's study, the population was junior level (young learners) students of 'Speak Up' English Course while in researcher's study used the eleventh grade students in a vocational high school.

The similarity between the researcher's study (*Improving the Eleventh Grade Students' Speaking Achievement through Whole Brain Teaching Method at SMK Farmasi Bina Medika Palembang*) and the researches above were on the use of WBT method. In Nurhasanah's study has the same independent and dependent variables with the researcher's study. The differences among the researcher's study, Cahya's study, Nurvianti's study, and Nurhasanah's study are if Cahya's

research used WBT for English vocabulary mastery, and Nurvianti's research used WBT method in physics, and if Nurhasanah's study used WBT method for speaking ability on the junior level students (young learners). On the other hand, the researcher used WBT to improve students' speaking achievement.

CHAPTER III
RESEARCH AND PROCEDURE

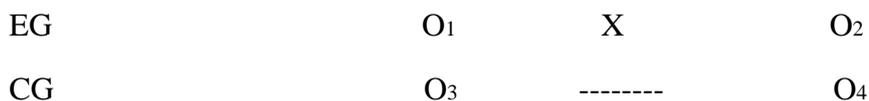
This chapter presents: (a) design of research; (b) variables of the study; (c) operational definition; (d) population and samples; (e) data collection; (f) data analysis.

3. METHODS AND PROCEDURES

3.1. Design of Research

In this study, the researcher used quasi-experimental design. In this design, a popular approach to quasi-experiments, the experimental Group A and the control Group B are selected without random assignment. Both groups took a pretest and posttest. Only the experimental group received the treatment (Cresswell, 2013, p. 219). The experimental group was given treatment by using WBT method, but the control group was not. This research applied 12 meetings including the pretest and posttest. After the treatment, the researcher gave the posttest which was exactly the same as the pretest.

Creswell (2012, p. 630) defines quasi experimental design can be diagrammed as shown below;



Where:

- EG : Experimental group
- CG : Control group
- O₁ : Pretest of experimental group

- O₂ : Posttest of experimental group
 O₃ : Pretest of control group
 O₄ : Posttest of control group
 X : Treatment for experimental group by using WBT method
 ---- : No treatment

3.2. Research Variables

According to Cresswell (2013, p. 84) “A dependent variables are those that (probably) cause, influence, or affect outcome”. In addition, Cresswell (2013, p. 84) states “Dependent variables are those that depend on the independent variables; they are the outcomes or results of the influence of the independent variables”.

In this research there are two variables, independent variable (X) and dependent variable (Y). The independent variable is Whole Brain Teaching method (X) and dependent variable is the students’ speaking achievement (Y).

3.3. Operational Definitions

The title of this study is “Improving Eleventh Grade Students’ Speaking Achievement through WBT method at SMK Farmasi Bina Medika Palembang.” in the title needed to be defined operationally. The terms that need to be explained are improving, whole brain teaching, and speaking achievement.

Improving refers to an act in order to enhance the students’ speaking achievement through WBT method.

WBT refers to method proposed by Biffle in 2010 which composed of seven core teaching techniques; Class-Yes, 5 Classroom Rules, Teach-OK, Switch,

Mirror, Hands and eyes, and Scoreboard. The method was used in the treatment for experimental class to improve the students' speaking achievement.

Speaking achievement refers to the ability and capacity acquired by the students in communicating their ideas or message orally. In this study, the students' speaking achievement was measured by speaking test.

3.4. Population and Sample

3.4.1. Population

“Population is a group of individuals who have the same characteristics.” (Cresswell, 2012, p. 142). The population of this study is 89 students, they are eleventh grade students of SMK Farmasi Bina Medika Palembang in the academic year of 2016/2017. The number of the population is 89 students as shown in the following table.

Table 1
The population of the study

NO	CLASS	TOTAL STUDENTS
1	XI A	29
2	XI B	29
3	XI C	31
TOTAL		89

(Source: SMK Farmasi Bina Medika Palembang academic year of 2016/2017)

3.4.2. Sample

According to Cresswell (2012, p. 142) “Sample is a subgroup of the target population that the researcher plans to study for generalizing about the target population.” In this study, the researcher chose sample of the study by using convenience sampling method. In addition, Cresswell (2012, p. 619) states

“Convenience sampling is a quantitative sampling procedure in which the researcher selects participants because they are willing and available to be studied.”

The sample of the study was taken from eleventh grade students of SMK Farmasi Bina Medika Palembang. This grade was chosen because it is willing and available to be studied. Based on the consultation that has been done by the researcher in the preliminary study in SMK Farmasi Bina Medika Palembang, the English teacher recommended two classes in which can be used for the research, XI A & XI B. The experimental group was chosen from the class which has the low mean score from the pretest, while another class with higher mean score from the experimental group became the control group. The following table shows the number of sample of this study.

Table 2
The Sample of the Study

No	GROUP CLASS	MALE	FEMALE	TOTAL
1	XI A (Control group)	2	27	29
2	XI B (Experimental group)	2	27	29
TOTAL				58

(Source: SMK Farmasi Bina Medika Palembang academic year of 2016/2017)

3.5. Data Collection

3.5.1 Test

The technique used by the researcher to collect the data was test. Based on Arikunto (2010, p. 223), test is a series of questions or exercises used to find out the students skill, knowledge, intelligence, and attitude of an individual or group. The researcher used test to measure the student's speaking achievement. There are two kinds of tests; pretest and posttest. The purpose of the test was to

measure the students' speaking achievement before and after the treatment in the experimental and control groups. The kind of test is oral test. The source of the test was taken from the syllabus for eleventh grade students. To know the score of the students' speaking achievement, it used speaking scoring rubric proposed by Brown (2003, p. 172-173). The aspects in the speaking rubric were fluency, pronunciation, grammar, vocabulary, and comprehension. The highest score in each aspect was 5, while the lowest score was 1.

3.5.1.1 Pretest

Pretest was employed before the treatment that was given to the experimental and control groups. Pretest was done to know students' the speaking achievement.

3.5.1.2 Posttest

Posttest was employed in the end of the program of the research. Post test was done in both groups, experimental and control groups. The test was used to know the students' speaking achievement after the treatment.

3.5.1.3 Test Instruments

In Pretest and Posttest, the researcher used oral test. The oral tests were given to measure the students' speaking achievement before and after the treatment. The students were spoke out about hobbies. The student came in front of the class and did monolog within 1-3 minutes about his/her hobby/ies. The researcher recorded the students' monolog by using video recording. To obtain a reliable score, three raters done the scoring based on the speaking rubric. The raters were English lecturers of UIN Raden Fatah Palembang.

Table 3
Assessment Format for Speaking

To assess students' speaking achievement, the researcher used the table below:

Grade/Semester :
Topic :

No	Name	Aspects of Assessment					Total
		Pronunciation (1-5)	Grammar (1-5)	Vocabulary (1-5)	Fluency (1-5)	Comprehension (1-5)	
1							
2							
3							
4							
5							
...							

- The highest score is 5
- The lowest score is 1
- The maximum score is 100

Student's score =

.... x 4 =

3.6 Research Instrument Analysis

3.6.1 Validity Test

“Validity is the development of sound evidence to demonstrate that the intended test interpretation (of the concept or construct that the test is assumed to measure) matches the proposed purpose of the test.” (Creswell, 2012, p. 164).

Fraenkel, Wallen, and Hyun. (2012, p. 147) argue that validity is the most important idea to consider when preparing or selecting an instrument for use.

3.6.1.1 Content Validity

According to Anderson (1975, p. 460), content validity refers to the extent to which the test we are using actually measures the characteristics or dimension

we intend to measure. The researcher made use of content validity to find out the validity of the speaking test by having expert judgment. The researcher devised a topic in accordance with the objectives of the test that was to measure students' speaking achievement. The result analysis in content validity was described in the table of specification. In the test of specification, it includes: objective, indicator, item and number of item. It was formulated based on the syllabus for eleventh grade students.

There were three validators evaluating the test whether it was appropriate or not. There are five aspects of determining the appropriateness based on likert scale, those are (absolutely inappropriate, inappropriate, moderate, appropriate, and absolutely appropriate) with the score 1 until 5. The result showed that instruction, topic, time allocation, content, and rubric were in appropriate category (Appendix 7). The table of specification test was displayed in table 4.

Table 4

Table of Test Specification

Objectives	Indicator	Item	Number of Item
The students are able to express and respond the expressions about hobbies and interests.	Question words in daily activity context is expressed and answered correctly.	Speak up about hobbies in monolog.	1
Total			1

3.6.2 Reliability Test

“Reliability means that the scores from an instrument are stable and consistent.” (Creswell, 2012, p. 159). Since it was measured as the result of three expert judgments. The result showed that speaking test with instruction, topic, time allocation, content, and rubric were in appropriate category. It can be concluded that the speaking test was reliable.

3.7 Data Analysis

In analyzing the data, t-test is used to find out the significance difference for both group and significance improvement in experiment class, t-test is used to compare two means. The data were analyzed by using the Statistical Package for Social Science (SPSS) type 17.0. Moreover, the researcher used and described some techniques as follows :

3.7.1 Data Description

In data description, there were two analyses to be done. They were; (1) distribution of frequency data and (2) descriptive statistic.

3.7.1.1 Distribution of Data Frequency

In this part, the score of the students were described by presenting a number of the students who got a certain score and its percentage. The distributions of data frequency were obtained from students' pretest score in control group, students' posttest score in control group, the students' pretest score in experimental group, and students' posttest score in experimental group. Then, the distribution of data frequency were displayed in a table analysis.

3.7.1.2 Descriptive Statistics

In descriptive statistics, number of sample, the lowest score, the highest score, mean, standard deviation, and standard error of mean are obtained. Descriptive statistics were obtained from students' pretest and posttest scores in control and experimental group.

3.7.2 Prerequisite Analysis

Before analyzing the obtained data, prerequisite analysis should be done to see whether or not the data were normal and homogen. This following were the procedure in prerequisite analysis.

3.7.2.1 Normality Test

According to Basrowi and Soeyono (2007, p. 78), normality test is used to measure whether the obtained data is normal or not. The data was obtained from students' pretest and posttest in experimental and control group.

In measuring normality test, the data from result of posttest of each group (experiment and control groups) was measured by using one sample Kolmogorov-Smirnov test in SPSS 17.0 (Statistical Package for the Social and Science) software application.

3.7.2.2 Homogeneity Test

Homogeneity test is used to measure the scores obtained whether it is homogen or not. Basrowi and Soeyono (2007, p. 78) stated that the data can be categorized homogen whenever p-output is higher than 0.05. In measuring homogeneity test, the researcher used Levene Statistics in SPSS 17.0 software application.

3.7.3 Hypotheses Testing

In measuring the significant improvement on students' speaking achievement who are taught by using WBT method and measuring the significant difference between students' speaking achievement who were taught by using WBT method and those who were not, t-test was used to compare two population means.

3.7.3.1 Measuring Significant Improvement

To know the significant improvement, the paired sample t-test was used for testing students' pretest and posttest in experimental group. The significant of improvement is accepted whenever the p-output (Sig.2-tailed) is lower than 0.05 and t-obtained is higher than t-table (2.048), while the significant improvement is rejected when the p-output (Sig.2-tailed) is higher than 0.05 than t-value is lower than t-table (2.048).

3.7.3.2 Measuring Significance Difference

To know the significant difference of the speaking achievement on the students who were taught by using WBT method and those who were not, an independent sample t-test was used for testing students' posttest scores in experimental group and posttest in control group. The significant difference is accepted whenever the p-output (Sig.2-tailed) is lower than 0.05 and t-obtained is higher than t-table (2.000). While the significant difference is rejected when the p-output (Sig.2-tailed) is higher than 0.05 than t-value is lower than t-table (2.000).

CHAPTER IV

FINDINGS AND INTERPRETATIONS

This chapter presents: (a) findings and (b) interpretations.

4.1 FINDINGS

This study deals with the title “Improving the Eleventh Grade Students’ Speaking Achievement through Whole Brain Teaching Method at SMK Farmasi Bina Medika Palembang”. The findings of the study are to analyze: (1) data descriptions, (2) prerequisite analysis, and (3) results of hypothesis testing.

4.1.1 Data Description

In data description, frequency distributions and descriptive statistics in the form of scores were obtained from students’ pretest and posttest in the experimental and control groups.

4.1.1.1 Distribution of Frequency Data

In distribution of frequency data, the students’ scores, frequency, and percentage were got from the students’ pretest and posttest scores in control group and students’ pretest and posttest scores in experimental group. They were presented below:

Table 5
Descriptive Statistics of Speaking Achievement

Variable	Category (Score Interval)	Frequency (%) N (29)	Mean	SD
Pretest control group	Excellent	0 (0%)	55.2096	7.18321
	Good	0 (0%)		
	Average	16 (55,2 %)		
	Poor	13 (44,8%)		
	Failed	0 (0%)		
Posttest control group	Excellent	0 (0%)	63.1724	4.10634
	Good	1 (3.5%)		
	Average	28 (96.5%)		
	Poor	0 (0 %)		
	Failed	0 (0%)		
Pretest experimental group	Excellent	0 (0%)	52.9310	6.34109
	Good	1 (3.5%)		
	Average	8 (28%)		
	Poor	20 (68.5%)		
	Failed	0 (0%)		
Posttest experimental group	Excellent	0 (0%)	67.6552	5.82651
	Good	10 (34.5%)		
	Average	18 (62 %)		
	Poor	1 (3,5 %)		
	Failed	0 (0%)		

Source: Statistical Analysis 2016

1) Students' Pretest Scores in Control Group

The analysis of distribution frequency in pretest scores in control group showed that there was no student in failed category (0%), 13 students who

were in Poor category (55.2 %), 16 students who were in Average category (44.8 %), and there was no student who was in Excellence and Good category (0 %). The result of pretest score in control group was described in Table 5. From the data obtained, half students were in Poor category. It can be concluded that the students speaking skill is still low, the students were actually confused what they want to say in English, and they were afraid to make mistake.

2) Students' Posttest Scores in Control Group

After posttest had been done to control group, it was found that there was no student in Failed and Poor category (0 %), 28 students were in Average category (96.5 %), 1 student who was in Good category (3.5 %), there was no student in Excellence category (0 %). The result of pretest score in control group was described in Table 5. After posttest in Control group, there was a raise in their speaking achievement, the control group was taught by teacher method. In posttest, the students were not really afraid of making mistake anymore because they have remembered what they want to say as in pretest.

3) Students' Pretest Scores in Experimental Group

After pretest had been done to experimental group, it was found that there was no student in Failed category (0 %), 20 students were in Poor category (68.5 %), 8 students who were in Average category (27.6 %), 1 student who was in Good category (3.5 %), and no student was in Excellence category (0 %). The result of pretest score in control group was described in Table 5. In experimental group, the mean score was lower than the mean

score of pretest in control group, almost 70% students were in Poor category in their speaking, the students hard to memorize about what they want to say about their hobbies, so the students tend to talk little.

4) Students' Posttest Scores in Experimental Group

After posttest had been done to experimental group, it was found that there was no student in Failed category (0 %), 1 student was in Poor category (3.5 %), 18 students were in Average category (62 %), 10 students were in Good category, and no student was in Excellence category (0 %). The result of pretest score in control group was described in Table 5. After the treatment using WBT method, there was a significance improvement in their speaking achievement, more than half number of the students were in Average category, the students knew the names of hobbies, they could gave examples and told more about their hobbies.

4.1.1.1.2 Descriptive Statistics

In descriptive statistics, number of sample, the score of minimal, maximal, mean, and standard deviation of mean are obtained. Descriptive statistics are got from the students' pretest scores in control group, students' posttest scores in control group, students' pretest scores in experimental group, and students' posttest scores in experimental group. They were presented below:

Table 6
Descriptive Statistics of the Students' Pretest and Posttest Score in Control Group

	N	Min	Max	Mean	Std. Deviation
Pretest Control	29	44	68	55.2069	7.18321
Posttest Control	29	56	71	63.1724	4.10634
Pretest Experimental	29	43	71	52.9310	6.34109
Posttest Experimental	29	53	79	67.6552	5.82651

1) Students' Pretest Score in Control Group

Based on analyzing data got from the pretest in control group, it was found that the minimum score was 44 while the maximum score was 68. The mean score was 55.2069 and the standard deviation was 7.18321. For detail description can be seen in table 6.

2) Students' Posttest Score in Control Group

Based on analyzing data got from the posttest in control group, it was found that the minimum score was 56 while the maximum score was 71, the mean score was 63.1724 and the standard deviation was 4.10634. For detail description was described in table 6.

3) Students' Pretest Score in Experimental Group

The result analysis of descriptive statistics of posttest in experimental group found that the lowest score was 43 while the highest score was 71, the mean score was 52.9310 and the standard deviation was 6.34109. For further description was described in table 6.

4) Students' Posttest Score in Experimental Group

The descriptive statistics from the result analysis of descriptive statistics of posttest in experimental group, it was found that the lowest score was 53. while the highest score was 79. The mean score was 67.6552 and the standard deviation was 5.82651. For further description is described in table 6.

4.1.2 Prerequisite Analysis

Before analyzing the data, prerequisite analysis has been done to see whether the obtained data was normal and homogen.

4.1.2.1 Normality Test

In normality test, the total of sample. Kolmogorov Smirnov Z, significant, and the result were analyzed. The scores were got from: (a) students' pretest and posttest score in control group and (b) students pretest and posttest score in experimental group. The test is considered normal whenever it is higher than 0.05.

Table 7
The Result of Normality in Pretest and Posttest in Control and
Experimental Groups

Variable	N	Mean	Std. Deviation	Kolmogorov-Smirnov	Result
Pretest Control	29	55.2069	7.18321	0.515	Normal
Posttest Control	29	63.1724	4.10634	1.179	Normal
Pretest Experimental	29	52.9310	6.34109	0.524	Normal
Posstest Experimental	29	67.6552	5.82651	0.429	Normal

1) Students' Pretest and Posttest Score in Control Groups

Based on the normality test of the students' pretest and posttest score in control group. It was found that the significance level of normality test of the students' pretest score in control group was 0.510 and posttest score was 1.179. From the result of the output, it could be stated that the obtained data is normal, because it is higher than 0.05. The statistics calculation of normality can be seen in table 7.

2) Students' Pretest and Posttest Score in Experimental Groups

Based on the normality test of the students' pretest and posttest score in experimental group. It was found that the significance level of normality test of the students' pretest score in experimental group was 0.812 and posttest score was 0.429. From the result of the output, it could be stated that the obtained data is normal, because it is higher than 0.05. The statistics calculation of normality can be seen in table 7.

4.1.2.2 Homogeneity Test

In homogeneity test, the total of sample. Levene statistics, significant, and the result were analyzed. The scores were got from: (a) students' pretest and posttest score in control group and (b) students pretest and posttest score in experimental group. The test is considered homogen whenever it is higher than 0.05.

Table 8

The Result of Homogeneity in Pretest and Posttest in Control Group and Experimental Group

	Sig.	Result
Control Group	0.008	Homogen
Experimental Group	0.856	Homogen

1) Students' Pretest and Posttest Score in Control Groups

Based on the calculation result measuring homogeneity test to students' pretest and posttest score in control group. It was found that the significance level of homogeneity test of the students' pretest and posttest score in control group was 0.008. From the scores, it could be stated that the obtained data is homogen, because it is higher than 0.05. The statistics calculation of normality can be seen in table 8.

2) Students' Pretest and Posttest Score in Experimental Groups

Based on the calculation result measuring homogeneity test to students' pretest and posttest score in experimental group. It was found that the significance level of homogeneity test of the students' pretest and posttest score in

experimental group was 0.856. From the scores, it could be stated that the obtained data is homogen, because it is higher than 0.05. The statistics calculation of normality can be seen in table 8.

4.1.3 Results of Hypotheses Testing

4.1.3.1 Measuring Significant Improvement on Students' Speaking Achievement taught by using WBT Method

To know the significant improvement, the paired sampe t-test was used for testing students' pretest and posttest in experimental group. The significant of improvement is accepted whenever the p-output (Sig.2-tailed) is lower than 0.05 and t-obtained is higher than t-table (2.048). While the significant of experimental group is rejected when the p-output (Sig.2-tailed) is higher than 0.05 than t-value is lower than t-table (2.048). The further calculation of the paired sample t-test was displayed in the table below:

Table 9

Analysis Result in Measuring Significant Improvement on Students' Speaking Achievement Score Taught by Using WBT Method

Experimental Group (Pretest- Posttest)	Mean Difference	Paired Sample t-test			Ho	Ha
		df	T	Sig. (2-tailed)		
	14.72414	28	14.376	0.000	Rejected	Accepted

From table 13, it can be seen that the p-output 0.000 and t-obtained 14.376 at the significance level $p < 0.05$ in two tailed testing with $df = 28$. The p-output was $0.000 < p\text{-value}$ and $t\text{-obtained } 14.376 > 2.048$. It can be

concluded that the significant improvement was accepted because the p-output was lower than significant level 0.05 and the t-value was higher than 2.048. The result of hypothesis testing was the null hypothesis was rejected and the alternative hypothesis was accepted. It means that there was a significant difference on the students' speaking achievement who were taught by using WBT method.

4.1.3.2 Measuring Significant Difference on Students' Speaking Achievement between Posttest in Control and Experimental Groups

To know the significant difference of the speaking achievement on the students who are taught by using WBT method and those who are not, an independent sample t-test was used for testing students' posttest scores in experimental group and posttest in control group. The significant difference is accepted whenever the p-output (Sig.2-tailed) is lower than 0.05 and t-obtained is higher than t-table (2.000). While the significant difference is rejected when the p-output (Sig.2-tailed) is higher than 0.05 than t-value is lower than t-table (2.000). The further calculation of the independent sample t-test was displayed in the table below:

Table 10

Analysis Result in Measuring Significant Difference between Control and Experimental Groups

Posttest (Control and Experimental)	Mean Difference	Independent Sample t-test			Ho	Ha
		df	T	Sig. (2- tailed)		
	4.48276	56	3.387	0.001	Rejected	Accepted

From table 14, it can be seen that the p-output was 0.001 and the value of t-obtained was 3.387 at the significance level $p > 0,05$ in two tailed testing with $df = 56$, the critical value of t-table = 2.000 ($3.387 > 2.000$). The significant difference is accepted whenever the p-output (Sig.2-tailed) is lower than 0.05 and t-obtained is higher than t-table (2.000), since the p-output was lower than 0.05 and the value of t-obtained was higher than the critical value of t-table, it means that there was a significant difference on the students' speaking achievement between the students who were taught by using WBT method in experimental group and those students who were not in control group .

4.2 INTERPRETATIONS

In order to strengthen the value of this study the interpretations are made based on the result of data analyses. According to the findings, there was a significant improvement on the eleventh grade students' speaking achievement who were taught by using WBT method and there was a significant difference on the eleventh grade students' speaking achievement who were taught by using WBT method and those who were not.

In teaching speaking for high school students, an English teacher should be able to use the appropriate way in order to make the students be more enthusiastic and interested in speaking English. According to Nunan (2003, p. 54-55), there are some principles for teaching speaking, first is by giving the students practice with both fluency and accuracy, learners must be given opportunities to improve their fluency as well as accuracy. Second is by using group work or pair work, pair work and group work can be used to increase the amount of time that learners get to speak in the target language during the lesson. It is in line with Nunan, the use of WBT method gives the students time to practice and use pair work in learning activities.

In this study, the researcher focused on the students' speaking achievement and WBT method as the method in teaching speaking. Based on the informal interview with the English teacher in preliminary study. It was found that the students were lack in speaking and writing. The students did not want to speak up because they were shame and afraid to make mistake. Then the English teacher recommended two classes for the research, XI A and XI B. Based on

the pretest result, the XI A got the higher mean score than in the XI B, the result of XI A speaking achievement was in average category and XI B was in poor category. It was because the students were not used to speak English, the students felt shame to speak up in English in front of the class because they were afraid to make mistake. The students were also lack of vocabulary and it was hard for them to express what they wanted to say, when the students spoke in English, they tend to translate the words directly from Indonesia to English because they found it easier and more natural to express themselves in their native language. It was relevant to the statement of Ur (In Al-Hosni, 2014, p. 23), there are many factors that cause difficulty in speaking, such as inhibition, nothing to say, low or uneven participation, and mother-tongue used.

Teaching speaking skill to students is not an easy task to do, the teacher should know how to make the students engage in the lesson, know the students' need and find the suitable teaching method. According to Brown (2001, p. 275-276), there are seven principles for designing speaking techniques, a teacher should use techniques that cover the spectrum of learner needs, provide intrinsically motivating techniques, encourage the use of authentic language in meaningful contexts, provide appropriate feedback and correction, capitalize on the natural link between speaking and listening, give students opportunities to initiate oral communication, encourage the development of speaking strategies. In this study, the researcher aimed to choose the experimental group which has lower mean score and the control

group which has higher mean score. Besides, both classes have the same number of students.

First, the researcher gave the treatment in experimental group by using WBT method while the control group was taught by their English teacher method(s). Based on the result of paired sample t-test on the pretest and posttest in experimental group, the t-obtained exceeded of t-table and p-output was lower than p-value. It means that WBT method can improve the students speaking achievement. The students were enthusiastic with WBT method implementation in learning process, because it gave the students something new and it was fun. The students participated in experimental group learned actively in the class, they talked a lot and express what they want to say to their friends. The students taught each other and did repetition so they remember what they have learned. Therefore, the students got higher score after the treatment. It is also strengthened by the director of WBT method (Biffle, 2010) who claims that teacher use of WBT method can engage the students in learning process because it activates the whole brain. It integrates an effective classroom management system with learning approaches that tap the way brain learns best.

The result is supported by the study conducted by Torio (2015) revealed that students who were taught by using WBT method had an average learning gain and the students had average to high motivation with intrinsic and extrinsic motivation in the top of two of the six components of motivations. The results also revealed positive effects to academic performance and motivation can be derived from the use of WBT as teaching method. Besides, Rahmatika (2015)

also indicated that the implementation of WBT method could increase the students' reading ability and grow the cognitive skill. The students were not only successful in their reading ability but also self-confidence. In the beginning the implementation of WBT method, the students confused at first but in the next meeting, they seemed enjoy the activity.

Second, based on the independent sample t-test on posttest results in experimental and control group, it was found than the t-obtained was higher than t-table and p-output was lower that p-value. It means that there was a significant difference on the students who were taught by using WBT and those who were not, but the researcher also found that there was a significant difference in students' speaking achievement in the control group. However, the difference was lower compared to the mean difference in the experimental group. This might be caused by some factors. The result of the informal interview conducted with the students in the control group showed that: (1) some students love to learn English, and (2) some students join English course out of school hours.

The researcher noticed that the students were happy in implementing the 5 classroom rules in the class, so the class was well organized and made the students more engaged with the lesson. The students in experimental group while the implementation of WBT method were practiced to activate the whole brain teaching with big seven daily techniques. In WBT method used repetition so the students could remember the lesson easily, the researcher asked the students to speak English in the class during the lesson and they practiced it with their classmates. The students in experimental group talked longer in posttest

than in pretest, they were able to compose the sentence in simple words. According to Biffle (2010, p. 241-245), there are three benefits of WBT method as follow; motivating the students by creating an activity in learning process that can be improved to get higher skill, creating student-centered learning environment where practice is the main focus, not performance or assessment, providing gains for students is the application of higher level thinking well.

This result is also supported by Nurvianti (2013), she investigated the significant difference by using WBT method. The result showed that the mean score in experiment class was higher score than in control class, the implementation of WBT method with active learning approach also positively affects on students' learning outcomes and it makes the students to be more active. Therefore, it can be inferred that using WBT method can be considered as one alternative method that can be used in teaching speaking.

From the explanation above, it can be concluded that WBT method was effective in improving the students' speaking achievement and it was very influential for teaching speaking on the eleventh grade students of SMK Farmasi Bina Medika Palembang.

CHAPTER V

CONCLUSIONS AND SUGGESTIONS

This chapter presents: (1) conclusions and (2) suggestions based on the findings and interpretation in the previous chapter.

5.1 Conclusions

Based on the findings and interpretations presented in the previous chapter, the researcher concluded that based on the result of pretest to posttest, there was a significant improvement on the eleventh grade students' speaking achievement who were taught by using WBT method and there was a significant difference on the eleventh grade students' speaking achievement who were taught by using WBT method and those who were not at SMK Farmasi Bina Medika Palembang. The students who were taught by using WBT method showed better improvement that can be seen from the result of the students in test. The students were enthusiastic with WBT method implementation in learning process, they practiced more to speak English with their peers, the students also could remember the lesson they have learned easily because they did repetition. WBT method can engage the students in learning process because it activates the whole brain. The researcher can concluded that the use of WBT method was very useful as one of the methods in teaching speaking skill.

5.2 Suggestions

Based on the conclusions above and based on the research that had been done, the researcher would like to offer some suggestions to English teachers, the students of SMK Farmasi Bina Medika Palembang and for other researchers.

1. For English Teachers

English teacher should be able to develop strategy, method, or media as teaching aid to intrigue the students' willingness to study English, especially speaking. English teachers of SMK Farmasi Bina Medika Palembang can use WBT method as an alternative method to improve students' speaking achievement. In teaching speaking, the teachers should implement the WBT method into fun environment to make the students engage in the class. The teacher can use teaching aid such as pictures to introduce vocabularies or simple song to teach grammar or make the role-play situation to make students practice speaking English. The English teachers should encourage the students and give them more time to practice their speaking.

2. For Students

The researcher suggest the students to be more active to express themselves to be more interested in speaking English. The students should increase their knowledge of English pronunciation, grammar, vocabulary, fluency, comprehension, and other aspects in speaking in order to have a good speaking and can be understood well by the listeners. The students should be brave to speak in front of class and practice English even in simple way. The

researcher wishes that in the future, the students could use WBT method as their favorite method not only in learning English, but also other subjects.

3. For Other Researchers

For other researchers, it is advisable for other researcher who are interested in conducting the same research by using WBT method to read more book, articles, and journal about WBT and learned the seven techniques in WBT method (Big Seven) deeply. The researcher suggest to the other researchers not only focus on WBT method and speaking skill but they can implement WBT method in other skills such as reading, speaking, and writing. Furthermore, the result can be used as the reference for further research in another topic discussion, in different English language skills by the deeper investigation.

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