

**DEVELOPING ENGLISH SPEAKING SKILL THROUGH
THE USE OF BRAIN BASED TEACHING METHOD**
*(An Experimental Study at X Students of SMK Informatika Komputer
Mahardika Makassar)*



THESIS

Submitted to the English Education Department
The Faculty of Teacher Training and Education
in Partial Fulfillment of the Requirements
for the Education Scholar Degree (S.Pd)

Oleh
Muh. Ragil Meidiputra
NIM 10535 4332 09

**ENGLISH EDUCATION DEPARTMENT
THE FACULTY OF TEACHER TRAINING AND EDUCATION
MUHAMMADIYAH UNIVERSITY OF MAKASSAR
2015**

TABLE OF CONTENT

	Page
COVER	i
LEMBAR PENGESAHAN	ii
APPROVAL SHEET	iii
STATEMENT LETTER	iv
AGREEMENT LETTER	v
MOTTO	vi
ABSTRACT	vii
ACKNOWLEDGEMENT	viii
TABLE OF CONTENTS	x
LIST OF TABLES	xii
LIST OF CHARTS	xiii
LIST OF APPENDICES	xiv
CHAPTER I INTRODUCTION.....	1
A. Background	1
B. Problem Statement	4
C. Objectives of Study	5
D. Significance of the Study	5
E. Scope of the Study.....	6
CHAPTER II REVIEW OF RELATED LITERATURE	7
A. Brain-Based Teaching (BBT).....	7
B. The Brain's Natural Learning System.....	8
C. The Principles of Brain-Based Teaching.....	12
D. The Implications for Teaching	12
E. English Speaking	17
F. Conceptual Framework	19
G. Hypotheses	20

CHAPTER III	RESEARCH METHOD	21
	A. Research Design	21
	B. Population & Sample.....	25
	C. Research Variables and Indicators	26
	D. Instrument of the Study	26
	E. Data Analysis	30
CHAPTER IV	FINDING AND DISCUSSIONS	32
	A. Findings	32
	B. Discussion	38
CHAPTER V	CONCLUSION AND SUGGESTION	42
	A. Conclusion.....	42
	B. Suggestion	43
BIBLIOGRAPHY		45
APPENDICES		
CURRICULUM VITAE		

LIST OF TABLES

Table	Page
3.1 Analysis of Specific Test Items: Speaking Score Sheet	27
3.2 Scoring Table	28
4.1 The Improvement of the Students who are taught by using BBT Method	32
4.2 The Improvement of the Students who are taught by using Direct Instruction Method	34
4.3 T-Test of the Pre-Test	36
4.4 T-Test of the Post-Test.....	37

LIST OF GRAPHICS

Graphic	Page
4.1 The Improvement of the Students' Speaking Achievement that are taught by using BBT Method.....	33
4.2 The Improvement of the Students' Speaking Achievement that are taught by using Direct Instruction Method	35

LIST OF APPENDICES

1. Master Table
2. Raw Data Analysis of Pre-Test and Post-Test(using SPSS)
3. Speaking Score Sheet (Observation Journal)
4. Lesson Plan
5. Teaching Materials
6. Game Materials
7. Pre-Test Sheet
8. Post-Test Sheet



بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

APPROVAL SHEET

Title : Developing English Speaking Skill Through the U
Brain Based Teaching Method (An Experime
Study at X Students of SMK Informatika Komp
Mahardika Makassar)

Name : MUH. RAGIL MEIDUPUTRA

Reg.Number : 10535 4332 09

Department : English Education Department

Faculty : Teacher Training and Education

After being checked and observed this thesis has fulfilled qualification
examined

Makassar, June 2015

Approved By

Consultant I

Consultant II

Dr. Hj. Andi Teatri Anna, MS.

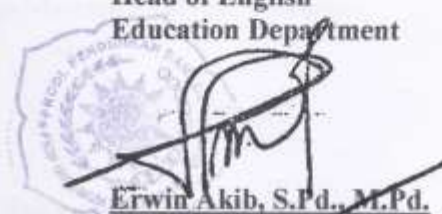
Umami Khaerati Syam, S.Pd., M.

Dean of FKIP
Muhammadiyah University

Head of English
Education Department



Dr. H. Andi Sukri Svamsuri, M.Hum.
NBM: 858425



Erwin Akib, S.Pd., M.Pd.
NBM: 860 934



بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

LEMBAR PENGESAHAN

Skripsi atas nama **MUH. RAGIL MEIDUPUTRA**, Nim. 10535 4332 09 diterima dan disahkan oleh panitia ujian skripsi berdasarkan Surat Keputusan Rektor Universitas Muhammadiyah Makassar Nomor : 087 Tahun 1436 H/2015 M, sebagai salah satu syarat guna memperoleh gelar **Sarjana Pendidikan** pada Jurusan Pendidikan Bahasa Inggris (S1) Fakultas Keguruan Dan Ilmu Pendidikan Universitas Muhammadiyah Makassar pada hari Senin tanggal **22 Juni 2015**.

05 Ramadhan 1436 H

Makassar,

22 Juni 2015 M

PANITIA UJIAN :

- 1. Pengawas Umum : **Dr. H. Abd. Fahnun Bahim, S.Pd., M.M.** (.....) *[Signature]*
- 2. Ketua : **Dr. H. Andi Sukri Svamsuri, M.Hum.** (.....) *[Signature]*
- 3. Sekretaris : **Khaerudin, S.Pd., M.Pd.** (.....) *[Signature]*
- 4. Penguji :
 - 1. **Dr. Hj. Andi Teo Ampa, M.S.** (.....) *[Signature]*
 - 2. **Ilaheh, S.Pd., M.Pd.** (.....) *[Signature]*
 - 3. **Dr. Purno Dewu, SS., M. Hum.** (.....) *[Signature]*
 - 4. **Dra. Radiah, M.Pd.** (.....) *[Signature]*

Disahkan oleh :
Dekan FKIP Universitas Muhammadiyah Makassar



Dr. H. Andi Sukri Svamsuri, M.Hum.
NBM : 858425

MOTTO AND TRIBUTE

“Education is not received. It is achieved.” – Albert Einstein

“It’s fine to celebrate success but it is more important to heed the lesson of failure.” – Bill Gates

“Sometimes when you innovate, you make mistakes. It’s best to admit them quickly, and get on with improving your other innovations.” – Steve Jobs

“We can do anything as long as we don’t give up” – Muh.Ragil

*This thesis is dedicated to
My beloved parents, my brother and sisters,
and especially my special one and all my friends,
for all of your support and pray for me to realizing my dreams.
May Allah SWT bless and will guide you all to your successes.*

ABSTRACT

Muh. Ragil Meidiputra. 2015. *Developing English Speaking Skill Through The Use of Brain Based Teaching Method (An Experimental Study at X Students of SMK Informatika Komputer Mahardika Makassar)*. Thesis. English Education Department. The Faculty of Teacher Training and Education. Muhammadiyah University of Makassar. Consultant I Hj. A. Tenri Ampa and Consultant II Ummi Khaerati Syam.

The objective of this research was to investigate whether the use of Brain Based Teaching Method could improve students' speaking skill at the tenth graders of SMK Informatika Komputer Mahardika Makassar. The subjects in this research were students of X.A as an experimental group and X.B as a control group which was 40 students in total. This research was an experimental research which was consisted of pretest, treatment and posttest.

The result of the t-test value in the pre-test between experimental group and control group (0.312) was lower than t-table (2.025) and ρ value (0.231) was higher than 0.05. So, in the pre-test there is not any significance difference between experimental group and control group.

The result of the t-test value in the post-test between experimental group and control group (4.712) was higher than t-table (2.025) and ρ value (0.015) was lower than 0.05. That statement then proved that H1 was accepted which stated that there is a significance difference between students who was taught by using BBT with those who is taught by using Direct Instruction method.

Based on the research findings above, the researcher could conclude that the use of Brain Based Teaching method was effective to develop the English speaking skill of X Students of SMK Informatika Mahardika Makassar.

Keywords: *brain based method, learning activity, learning outcomes.*

ACKNOWLEDGMENT

Alhamdulillahirabbil ‘alamin, Praise is merely to the Almighty Allah SWT for the gracious mercy and tremendous blessing that enables the writer to accomplish this bachelor thesis entitled: *Developing English Speaking Skill Through the Use of Brain Based Teaching*. This bachelor thesis is presented to fulfill one of the requirements in accomplishing S1 degree in English Education Department, the Faculty of Teachers Training and Education, Muhammadiyah University of Makassar.

The writer would like to express his greatest honor and appreciation to his beloved parents, Abdul Muin Hamid and Syarifah Alnurtuty Effendy. It is truly undoubted that loves, cares, spirits, motivation, patience and willingness to wait for writer's graduation and timeless prayers in days and night are everything to the writer. The writer also would like to express his special appreciation to the advisors, Dr. Andi Tenri Ampa, MS. and Ummi Khaerati Syam, S.Pd.,M.Pd. for the valuable assistance and inspiration to the completion of this bachelor thesis.

The writer also expresses his appreciation to Dr. Irwan Akib, M.Pd. (Rector of Muhammadiyah University of Makassar), Dr. A. Syukri Syamsuri, M.Hum (Dean of Teacher Training and Education Faculty), Erwin Akib, S.Pd., M.Pd. (Head of English Education Department) and all the lecturers and staff of Muhammadiyah University of Makassar who have given their valuable guidance, knowledge, support and help during writer's study until the completion of this thesis.

Furthermore, the writer would like to say gratitude to Marselinus Mingge, Bc.Hk., S.Sos., M.Si, the headmaster of SMK Informatika Komputer Mahardika Makassar, who has given the writer permission to conduct the research. And also to 40 students in X grade of SMK Informatika Komputer Mahardika Makassar for their good cooperation, and to Drs. Baharuddin, M.Pd the English teaching in SMK Informatika Komputer Mahardika Makassar for his assistance during the research.

The last but not least, the writer would also address his appreciation and gratitude to his brother and sisters, Khadijah Muin, Muh. Nur Muin, Leily Ulfa, Neneng Mutia and also Tazkiyah Aryad for their support and pray that help and support to realize the writer's dream. And also to beloved big family of English Department 2009 class K, especially for Agus Rijaya, Arfan Latief, Amirun, and Hardianto. Thank you for the unforgettable moment, helping, sharing, and for being such a great companion during out togetherness at university till now.

Finally, with all humility, the writer would appreciate all suggestion and correction from all sides, as long as the suggestions and corrections will help for the improvement of this thesis, the writer believe a problem will not have meaning at all without correction. The writer wishes that this thesis will be beneficial for all reader, especially for the writer himself. Amin.

Makassar, June 2015

Writer

CHAPTER I

INTRODUCTION

A. Background

English is international language used for communication in business, education and other careers. The impact of globalization has made listening or receiving and speaking or sending information important skills. These skills can promote understanding, provoke interest in a variety of cultures, as well as create good will and develop better relationships on an international level. The English language also allows learners to discover the customs, cultures and other aspects of the countries where it is spoken as the first language.

In today's fast moving world all learners are eager to learn a foreign language because they are driven by their inborn curiosity to explore the world and the learning experience therefore is a constant source of intrinsic pleasure for them. Reality, however, rarely lives up to these ideal. Dornyei claims "If students could freely choose what to do, academic learning for many would be most likely features low on their agenda" (Dornyei 2001).

Furthermore, speaking proficiency can reveal background knowledge. When a learner develops one skill, it becomes easier to learn other skills (Lado, 1961; Ur, 1998). For example, effective speaking leads to clear listening and also makes reading and writing easier. Consequently, it is necessary for teachers to promote learning with appropriate classroom activities and using the target

language in various real situations is the most important experience for students (Scott, 1981).

Similarly, Jack and Willy (2002) claim that a large percentage of language learners throughout the world learn English to develop their spoken proficiency. However, speaking is a complex skill, and its complexity makes teaching spoken English challenging. Jack and Willy (2002) also claim that speech is used for many reasons, including initiating social contact, starting relationship of talking to friends.

When we engage in communication with someone our purpose may be to express our opinion, persuade them to do something, or provide information. Moreover, we may use speaking to issue instructions, to describe things, to complain, to make polite requests or to entertain people (Jack & Willy, 2002).

The successful education of students depends on the ability of their teacher. The experiences which teacher provide for learner should be based on real life experiences and solving realistic problems. Learners should use language as a tool to communicate until they achieve language competency. Jack and Willy (2002, as cited in Green, Christopher, and Lam, 2002) examined speaking proficiency in terms of discussion skills. They explore how speaking skills can be developed in the classroom and recommend classroom activities based on common problem experienced by learners. These activities should be based on different aspects of spoken English and features interactive activities.

According to Boss (2011) said that by understanding how the brain works, educators are better equipped to help students with everything from

focusing attention to increasing retention. “That is the promise of brain-based learning, with draws insights from neurology, psychology, technology, and other fields” (Boss: 2011).

The use of brain researches in education world is a must. Not only because education requires brain (it is difficult to teach someone who doesn't have brain or abnormal brain), but also because education has a purpose to optimize the use of brain. Not only for rational-cognitive aspect, but also for emotional, physical, and spiritual (Barbara, 2002).

These research is concerned with theories of Barbara (2002). According to the research showed that brain develops five learning systems: *Cognitive, Emotional, Social, Physical, and Reflective* (Barbara: 2002). Barbara (2002, cited in Taufiq, 2002) also said that those five learning systems run simultaneously, and there is no system can be completely turned off, although a system can only works one a time. In education, the influence of Brain-Based Teaching (BBT) can be seen through the development of curriculum introduction and assessment. BBT also shows that the brain works more effectively with learning activities that are designed with brain function in mind.

In conclusion, BBT is a flexible process that encourages students to be enthusiastic learners and enjoy participating in the classroom activities. BBT can make lessons clearer and easier to understand. It also make the classroom atmosphere more relaxing and enhances the learning process. Here the writer wanted to implement Brain-Based Teaching (BBT) method in an effort to improve

the speaking ability of these students. The findings will reveal whether or not BBT method and activities can help students to develop their speaking ability.

SMK Informatika Komputer Mahardika Makassar is one of prestigious vocational computer high school in South Sulawesi. This school is also one of bilingual schools in Makassar which uses two languages as a learning language (English & Indonesia). The students are expected to be able speak and learn English better than the regular students.

Based on explanation above, the writer chooses the topic **“How is the application of BBT to improve the students’ grammar, fluency, vocabulary, pronunciation and comprehension in speaking English?”**

B. Problem Statement

Based on the general background of the study above, the problem can be stated as follows:

1. How is the improvement of the students’ speaking achievements that are taught by using BBT method in SMK Informatika Komputer Mahardika Makassar class X.A in the academic year of 2014/2015?
2. How is the improvement of the students’ speaking achievements that are taught by using Direct Instruction method in SMK Informatika Komputer Mahardika Makassar class X.B in the academic year of 2014/2015?
3. Is there any significant difference between students who have been taught by using BBT method and those who have been taught using Direct Instruction method at tenth graders of SMK Informatika Komputer Mahardika Makassar in academic year of 2014/2015?

C. Objectives of Study

The purpose of this research is:

1. To investigate the improvement of the students' speaking achievements that are taught by using BBT method in SMK Informatika Komputer Mahardika Makassar class X.A in the academic year of 2014/2015.
2. To investigate the improvement of the students' speaking achievements that are taught by using Direct Instruction in SMK Informatika Komputer Mahardika Makassar class X.B in the academic year of 2014/2015.
3. To investigate whether there is any significance difference improvement in speaking achievement between the students who are taught using BBT method and the students taught using Direct Instruction method at tenth grader of SMK Informatika Mahardika Makassar in academic year of 2014/2015.

D. Significance of the Study

According on the object of study above, the significance of research can be stated as follows:

1. Students

The learning activities based on the BBT activities in this study provided the alternative and innovative teaching practices to improve the speaking ability of students.

2. Teachers

To share the better technique in teaching English, in order to make situation on classroom to be more interesting for student to learn English instead

of learn with selfsame method.

3. Reader

The writer hopes that the result of the research can be used as reference for those who want to conduct a research in teaching English and be useful information and positive contribution.

E. Scope of the Study

To restrict the scope of the study, this research only focuses to apply BBT method to the X.A students' at SMK Informatika Mahardika Makassar as an experiment class for the subjects of the research and X.B students' at SMK Informatika Mahardika Makassar as a control class. In this research, the writer focuses on how to develop students' English speaking skill by using BBT method.

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter describes some theories and opinions that can be discussed in this and based on the review of related literature.

B. Brain-Based Teaching (BBT)

Brain-based teaching focuses on how the brain learns. BBT includes accepting the rules of brain processing and organizing the teaching according to these rules to help the mind for meaningful learning. BBT is student-centered learning that utilizes the whole brain and recognizes that not all students learn in the same way. It is also about constructing their own knowledge in a variety of learning situations and contexts. (Caine and Caine, 1994; 1997; Caine, Geoffrey, Renate Caine and Sam Crowell, 1999).

BBT is to learn with the brain in our mind (Jensen, 2000 as cited in Jampamoon, 2012). Similarly, LeDoux (1996, as cited in Jampamoon, 2012) states that experiences, thoughts and memories are always embedded in emotions and corresponding physiological and psychological states. The students try to find and give the meaning to the answer themselves. This is the perfection of BBT. In this respect, teachers have to think about the findings of Brain-Based Teaching. They should encourage the students to have problem-solving experiences and let them go deep into the meaning.

Duman (2006) compared social studies instruction based on brain-based instruction and traditional teacher-centered method of the sixth grade students of

Turdu 100th year Primary School in Mugla. The control group was carried out in the accordance with traditional teacher-centered method and the experiment group instruction was done in accordance with brain-based learning and teaching principle. He found that the arithmetic average of academic achievement points of experiment group is much more than the control group.

Bonsoompan (2007) studied the use of BBL to encourage students to increase their knowledge of vocabulary and improve their reading ability. She found that after the Brain-Based Learning activities, students showed and increased knowledge of vocabulary that she described as very good and a level of improvement in their reading ability that she described as good.

B. The Brain's Natural Learning System

Ornstein (1986, cited in Pasiak, 2002) showed some learning methods as a brain's natural operating system. Each individual is similar with a chamber containing a group of people who act automatically and unconsciously, often without guidance and approval of all members of the group (Ornstein, 1986). Ornstein describes various control centers and various type of memory that is associated with every thought.

According to Ornstein (1986: 22, cited in Pasiak, 2002: 45), Some people (in the group) learn effectively through repetition; some people have a strong memory for names, some of them remember about person's name, and the others remember about places; some people remember about conversation; some people forget about matters and duties; some people can remember the right information

at the right time. All of them are mental abilities which are separated, and each individual has a variety of capabilities with their own combination.

A researcher showed that brain develops five learning system. Figure 1 illustrated the five systems and its manifestations in everyday life.

Figure 1

The Brain's Natural Learning System and its manifestations in everyday life.

1. Emotional Learning System

Emotional Learning System plays an important role in learning process, because if teachers don't create the class atmosphere that is conducive to emotional security and personal relationship for their students, it will make the students won't learn effectively and can completely reject to learn (Pasiak, 2002: 59). Teachers who cultivate emotional system serve as mentor for students to realize students' personal goals that make sense; and by supporting the students in an effort to become whatever students can achieve. If the subject meets all these criteria, academic anxiety can be reduced, and the emotional system-and also the students-ready to learn.

2. Social Learning System

The natural tendency of social learning system is the desire to be part of the group, to be respected, and to enjoy the attention from the others (Pasiak, 2002: 60). Dunn and Dunn (1992,1993, cited on Pasiak, 2002: 60) expressed the social systems as one of the five areas of learning styles. Dunn's research focuses

on students' desire to work alone, with another person, in a small or large group, and with the adult who is fun or clever as an element of the social field.

3. Cognitive Learning System

Throughout history, cognitive learning system of the brain received the most attention because the system is related to reading, writing, arithmetic, and all other aspects of the development of academic skills (Pasiak, 2002: 62).

Pasiak (2002: 62) said that the attention in cognitive system puts the teacher in the role of *a learning facilitator* and the students on the role of *problem solvers and the real decision makers*. The facilitator does not admit that the facilitator knows all the answer, but provides the class with a problem to solve, and prepare supporting materials to be the solutions, while the students meet their needs to know.

4. Physical Learning System

Physical learning system likes challenging tasks that are similar with exercise, where teacher trains, inspires, and encourages the active participation to achieve success (Pasiak, 2002: 63). Physical learning system needs to be involved actively, because the system cannot process information passively to be thrown on the test.

5. Reflective Learning System

Reflective learning system involves personal consideration to their own learning which weighs achievements and failures, and asked what works, what does not and which ones need to be improved (Pasiak, 2002: 64).

Similarly, Dunn and Dunn (1992,1993, cited on Pasiak, 2002) said that understand the personal learning style and learn to use the preferred style can improve the academic achievement. For example, if students know that it is best to learn by listening to the story about the new information, they can choose a book with a particular topic and asks for the story to be recorded.

C. The Principles of Brain-Based Teaching (BBT)

Cain and Cain (1991) established the three major factors. First, teachers must immerse learners in complex, interactive experiences that are both enriched and based on real-life situations. For example, teachers can immerse students in learning about foreign culture to encourage them to learn a foreign language. Second, educators must teach in a way that utilizes the natural processes of the brain. Last, students need interpersonal challenges to make them more active in the classroom.

Cain... et al (2005) established the three instruction techniques associated with Brain-Based Teaching. The first step is orchestrated immersion. The TeacherS should create a learning environment that promotes immersing students in an educational experiences. The second step is relaxed alertness. Teachers should eliminated fear in students while still maintaining a challenging environment. The third step is active processing. Teachers should allow the students to combine and internalize information by active processing.

Furthermore, in accordance with the twelve principles of BBT, as a researcher I have defined BBT as the processes and activities that motivate students to study, promote intrapersonal intelligence and interpersonal intelligence

and activities used by this researcher included relaxes activities, movement activities, learning activities, group work and self-reflection.

D. The Implications for Teaching

Caine and Caine (1991) offered the following implications for teaching based on Brain-Based Teaching. First the brain performs many functions simultaneously. Learning is enhanced by a rich environment with a variety of stimuli. Teachers should present content through a variety of teaching strategies, such as physical activities, individual learning times, group interactions, artistic variations, and musical interpretations to help orchestrate student experiences.

Second, Learning engages the entire physiology. Physical development, personal comfort, and emotional state affect the ability to learn. Be aware that children mature at different rates' chronological age may not reflect the student's readiness to learn. Incorporate facets of health (stress management, nutrition, exercise) into the learning process (Caine and Caine, 1991).

Third, the search for meaning is innate. The mind's natural curiosity can be engaged by complex and meaningful challenges. Strive to present lessons and activities that arouse the mind's search for meaning. The brain is designed to perceive and generate patterns. Present information in context (real life science, thematic instruction) so the learner can identify patterns and connect with previous experiences (Caine & Caine, 1991).

Emotions and cognition cannot be separated. Emotions can be crucial to the storage and recall of information. Help build a classroom environment that promotes positive attitude among students and teachers and about their work.

Encourage students to be aware of their feelings and how the emotional climate affects their learning (Caine and Caine, 1991).

The brain simultaneously perceives and creates parts and wholes. Try to avoid isolating information from its context as it makes learning more difficult. Design activities that require full brain interaction and communication. Learning involves both focused attention and peripheral perception. Place materials (posters, art, bulletin boards, music) outside the learner's immediate focus to influence learning. Be aware that the teacher's enthusiasm, modeling, and coaching present important signals about the value of what is being learned (Caine & Caine, 1991).

Learning always involves conscious and unconscious processes. Use "hook" or other motivational techniques to encourage personal connections. Encourage "active processing" through reflection and metacognition to help students consciously review their learning.

E. Scope of the Study

To restrict the scope of the study, this research only focuses to apply BBT method to the X.A students' at SMK Informatika Mahardika Makassar as an experiment class for the subjects of the research and X.B students' at SMK Informatika Mahardika Makassar as a control class. In this research, the writer focuses on how to develop students' English speaking skill by using BBT method.

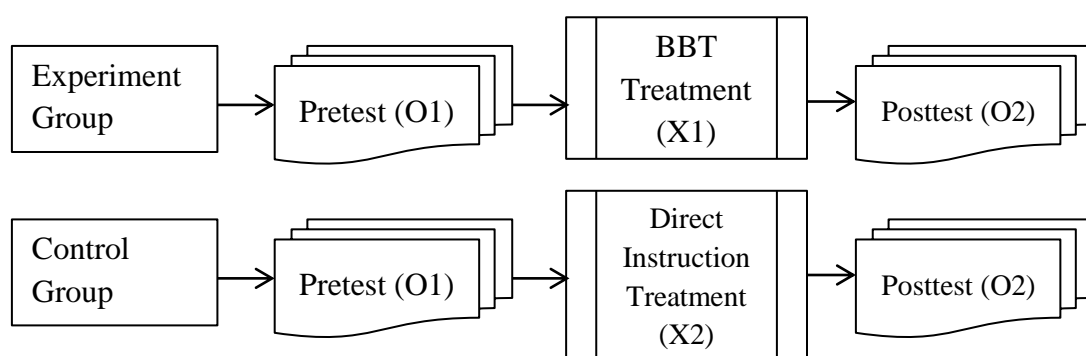
CHAPTER III

RESEARCH METHOD

This chapter discusses the subject of the study, population, sample, research design, procedure of the experiment, instruments of the study, scoring system, and technique of data analysis.

A. Research Design

The researcher used the method which was suitable with the research design, subject method, and student situation. In this case the researcher used quasi-experimental design as a research design. The researcher took X.A students as an experimental group and X.B students as a control group, the researcher conducted a pretest (O1) to measure students speaking ability on both classes. After that, the subject on the experimental group was exposed to a treatment (X1) which used Brain Based Teaching method and on the control group the researcher used Direct Instruction method (X2). And finally, the researcher conducted a posttest (O2) for both classes to measure students speaking achievement after conducting the teaching method (X1 & X2). The research design was conducted as follows:



Below was the draft about the procedure of the research.

1. Pretest

Pretest for control group was being given before the treatment. First, the researcher came to the class that was chosen as the control group. Then the researcher introduced himself to the class and explained to the students about what students were going to do. After that, the researcher interviewed the students in English and ordered the students to perform a short dialogue in pair. The pretest was conducted to measure the speaking ability of the sample.

The procedure of the pretest for the experimental group was same as the control group. The pretest was conducted to measure the speaking ability of the sample. First, the researcher came to the class that was chosen as the experimental group. Then the researcher introduced himself to the class and explained to the students about what students were going to do. After that, the researcher interviewed the students in English.

2. Treatment

a. Experimental Group (Brain Based Teaching Method)

For the experimental group, the researcher used BBT (Brain Based Teaching) method as a treatment as follows:

- 1) Opening
 - a) Changed classroom condition

The researcher arranged the students' position in the classroom into 'U' shape to create broader visibility (Atmosphere changing).

b) Played an Ice Breaking Games

The researcher played a game to reduce tension and made the students relax (Emotional Learning System).

c) Introduced the material

The researcher introduced the students the material or the topic that would be given to the students by taught about grammar and some expressions that is used in speaking by using interactive teaching aids (Cognitive Learning System).

2) Main Activity

a) Showed an example dialogue

The researcher did a role-playing activity by using dialogue in front of the class to show the students how to use the target expressions in dialogue (Cognitive Learning System).

b) Played a game about the target material

The researcher gave an interactive game to make students used to the expressions that have been taught by the researcher such as '*tic tac toe*', *stop the bus* games, etc (Physical Learning System).

c) Made and practiced a dialogue

The researcher asked the students to make a group and then made a short dialogue with their group by using the target expressions that was already being learned and practiced it together in a form of role-play activity (Social Learning System). While the group practiced their dialogue, the researcher noted some errors in students' speaking.

3) Closing/Conclusion

In this part, the researcher reminded the students about the target expression that had been taught before, showed the students their errors in speaking and gave the students some tips to improve their speaking (Reflective Learning System).

b. Control Group (Direct Instruction Method)

The researcher taught by using Direct Instruction method for the control group as a treatment as follows:

1) Opening

a) Introduced the material

The researcher gave the students the copy of the target material and then explained about the target expression in the material.

b) Gave an Example

The researcher gave some examples about how to use the target expressions in speaking and in a form of dialogue.

2) Main Activity

a) Made a dialogue

The researcher asked the students to make a group of two and made a short dialogue using the target expression.

b) Practiced the dialogue

The researcher asked the students to practice the dialogue in front of the class. The researcher pointed out some errors in students' speaking.

3) Closing/Conclusion

The researcher reminded the students about the target material and explained more about some errors that students made while practicing the dialogue.

3. Posttest

Posttest was given to the control group after conducting all of the treatments and the pretest. The test that was given to the students are the same as the pretest.

For the experimental group, posttest was conducted after treatment. Here, the researcher conducted the interview and asked the students to make a dialogue for certain conditions or events and played the role-play activity about the dialogue that they have just made.

B. Population & Sample

1. Population

In this research the population was the X students of vocational computer high school students in SMK Informatika Komputer Mahardika Makassar in the academic year 2014/2015. It is located at Jl. Perintis Kemerdekaan, Makassar-South Sulawesi. It has two classes from X.A – X.B. Each class has 20 students, so the total population is about 40.

2. Sample

The required samples were determined by the research problems, objectives, and typical data. So, by observing the characteristic of the sample, the researcher can make certain interferences about the characteristic of the

population from which is drawn. The sample was consisted of all students from the population who is chosen to participate in the research. Since the population was 40 students divided into two classes, one class was selected as an experimental group and one class was selected as a control group by using Total Sampling technique in choosing the sample.

The researcher took a group as the subject research was X.A class as the experimental group and X.B class as the control group. Both classes were selected based on the consideration such as: (1) these classes were given the same English material by the same English teacher, and (2) the students of those classes were equal in level of English.

C. Research Variables and Indicators

In this research, there were two variable included.

1. Research Variables

In this research, the dependent variable was the English Speaking skill of the SMK Informatika Komputer Mahardika Makassar students and the independent variable was Brain Based Teaching method.

2. Indicators

The indicators of dependent variable for this research were students' grammar, fluency, vocabulary, pronunciation, and comprehension in speaking English.

D. Instrument of the Study

The instrument used in this study included the pretest, and the posttest.

Table 3.2 Scoring Table

Grammar	4	Excellent, and there was consistent subject-verb agreement; consistent and logical conjugation of verbs, including expression of the tenses.
	3	Good, and the subjects generally agreed with verbs; the verbs used the correct tenses of were conjugated logically.
	2	Fair, some subject agreed with verbs and some verbs were correctly conjugated.
	1	Poor with no subject-verb agreement and no verb conjugated.
Vocabulary	4	Excellent and that most of listed words were employed and creative expression was demonstrated.
	3	Good and that many of the new vocabulary words used.
	2	Fair and that vocabulary words used.
	1	Poor and that few or none of the vocabulary words from the unit were used.
Pronunciation	4	Excellent and that their pronunciation is understandable, with only a few errors.
	3	Good and that their pronunciation is

		understandable but contains some errors.
	2	Fair and that their pronunciation difficult to understand, but they clearly made an effort.
	1	Poor and that their pronunciation was very difficult to understand, and that they looked for words with many starts and stops.
Fluency	4	Excellent and that the student was able to communicate clearly with no difficulty.
	3	Good and that the student was able to express ideas fluently with only a little difficulty.
	2	Fair and that the student had a difficult expressing ideas fluently.
	1	Poor and that the student was unable to express ideas fluently and there were many pauses or breaks in their speech.
Comprehension	4	Excellent and they could describe amount of the numbered items in the picture, clearly comprehending the setting and task.
	3	Good and their speech expresses and understanding of the unit topic and that a few items were described in some way.
	2	Fair and their description reveals an understanding of the unit topic and that 3-4

		items were described.
	1	Poor and that the attempt to describe the picture showed minimal comprehension.

(Montgomery, 2011)

E. Data Analysis

The data was collected through pretest and posttest (scores) were analyzed quantitatively through the follows steps:

1. Finding out the students' speaking achievement score used the following formula:

$$S = \frac{C}{NC} \times 10$$

Where S : Student's achievement score

C : Student's achievement score before conversion

NC : The number of maximum score before conversion

2. Finding out the students' average score used the following formula:

$$A = \frac{\sum S}{NS}$$

Where A : student's average score

$\sum S$: The number of all student's speaking score

NS : The number of maximum speaking score

(Montgomery, 2011)

3. Finding out the mean score used the following formula:

$$X = \frac{\sum X}{N}$$

Where \bar{X} : mean score
 $\sum X$: The number of all scores
 N : The number of students

(Gay, 2006)

4. Finding out the significant difference between control and experimental group by calculated the value of t-test:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\left(\frac{SS_1 + SS_2}{n_1 + n_2 - 2}\right) \left(\frac{1}{n_1}\right) + \left(\frac{1}{n_2}\right)}}$$

Where t : Test of significance
 \bar{X}_1 : Mean score of the experimental group
 \bar{X}_2 : Mean score of the control group
 SS_1 : Sum of square of experimental group
 SS_2 : Sum of square of control group
 n_1 : Subject of experimental group
 n_2 : Subject of control group

(Gay, 2006)

5. Calculating the mean score and standard deviation used the following formula:

$$SD = \sqrt{\frac{SS}{N - 1}}$$

Where SS : $\sum X^2 - \frac{(\sum X)^2}{N}$
 \bar{X} : Mean
 $\sum X$: The sum of all score

N : Total number of subject

SD : Standard deviation

(Gay, 2006)

CHAPTER IV

FINDING AND DISCUSSIONS

This chapter particularly presents the findings of the research which are presented as data description, and the discussion of the findings reveals arguments and further interpretation of the findings. In this chapter, the writer analysed the data consisting of the result of pre-test and post-test either in experimental group or control group.

A. Findings

1. The Improvement of Students' Speaking Achievement that are Taught by Using BBT Method

In this part, the researcher would like to present the improvement of Students' speaking achievement of the students who are taught by using BBT method as follow:

Table 4.1
The Improvement the Students who are taught by using BBT Method

No.	Speaking Aspect	Pre-test	Post-test	Improvement (%)
1	Grammar	5.20	7.50	44.23%
2	Fluency	5.53	7.80	40.96%
3	Vocabulary	5.95	8.13	36.56%
4	Pronunciation	6.43	8.38	30.27%
5	Comprehension	6.74	7.81	15.88%
	Average Score	7.12	7.50	5.39%

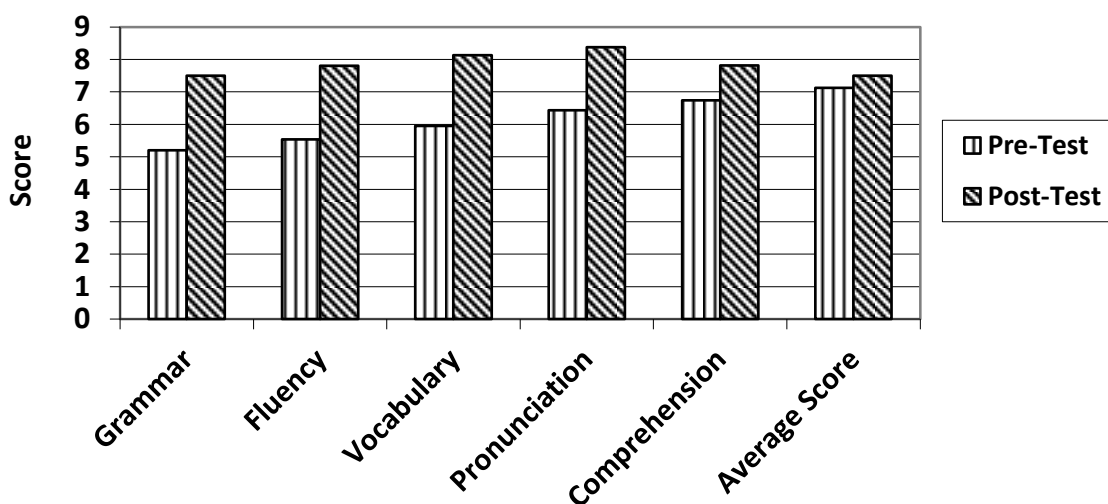
Source: *Primary Data*

Table 4.1 above showed that the average of students' grammar score in pre-test was lower (5.20) and improved in post-test (7.50). The improvement of the students' grammar score was about 44.23%. The table also showed that the

average of students' fluency score in pre-test was 5.53 and in the post-test was 7.80, it improved about 2.27 points (40.96%). The vocabulary score also showed improvement about 2.18 points (36.56%). The table showed that in pre-test, students' vocabulary score was 5.95 and in post-test was 8.13. The pronunciation score in pre-test was 6.43 and it improved about 1.95 points (30.27%) in post-test (8.38). The table also showed that there are improvement in students' comprehension score about 1.07 points (15.88%). In the pre-test students' comprehension average score was 6.74 and in the post-test the score was 7.81.

The Improvement of the students' speaking achievement that are taught by using BBT method above also can be seen at the graphic below:

Graphic 4.1.
The Improvement of The Students' Speaking Achievement
that are taught by using BBT Method



2. The Improvement of Students' Speaking Achievement that are Taught by Using Direct Instruction Method

The writer would like to present the improvement of speaking

achievement of the students who are taught by using Direct Instruction method as follow:

Table 4.2
The Improvement of the students who are taught by using
Direct Instruction Method

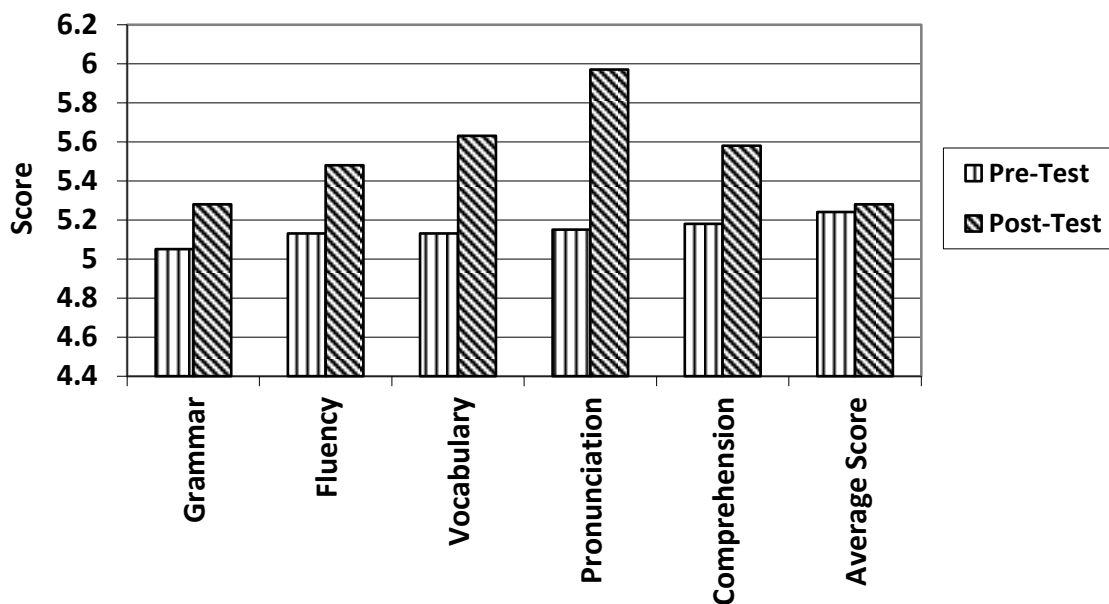
No.	Speaking Aspect	Pre-test	Post-test	Improvement (%)
1	Grammar	5.05	5.28	4.45%
2	Fluency	5.13	5.48	6.75%
3	Vocabulary	5.13	5.63	9.70%
4	Pronunciation	5.15	5.97	15.76%
5	Comprehension	5.18	5.58	7.73%
	Average Score	5.24	5.28	0.71%

Source: *Primary Data*

Based on the table 4.2 above, the control group showed the less significant result in the post-test. The grammar average score only improved about 0.23 points (4.45%). In the pre-test the score was 5.05 and in the post-test the score was 5.28. The students' fluency average score in the pre-test was 5.13 and in the post-test the score was 5.48. It improved about 0.35 points (6.75%). In the students' vocabulary score in the pre-test was 5.13 and in the post-test the score was 5.63. It improved about 0.5 points (9.70%). The table also showed that the students' pronunciation average score in the pre-test was 5.15 and in the post-test the score was 5.97. The students' pronunciation average score improved about 0.81 points (15.76%). The table showed less improvement in the students' comprehension score which improved about 0.40 points (7.73%). In the pre-test the students' comprehension score was 5.18 and in the post-test the score was 5.58.

The Improvement of the students' speaking achievement that are taught by using BBT method above also can be seen at the graphic below:

Graphic 4.2
The Improvement of the Students' Speaking Achievement that are taught by using direct instruction method



3. The Result of the T-test between Experimental and Control group.

In this part, the researched showed the result of the T-test between experimental and control group to find out the significance different in pre-test and post-test.

a. The T-test result of the Pre-test

The researcher processed the data to measure the significance in the pre-test between experimental group and control group using t-test as follows:

Table 4.3
T-Test of the Pre-Test

Group	N	Mean	Std. Deviation	ρ value	t-value	t-table
Experimental Group	20	5.20	1.370	0.231	0.312	2.025
Control Group	20	5.05	1.653			
Total	40					

Source: *Primary Data*

Based on the table 4.3 above showed that the mean of the experimental group in pre-test was 5.20 and for the control group the mean score was 5.05. It showed that there were 0.15 differences in the mean score. For standard deviation in pre-test for experimental group were 1.370 and for control group were 1.653. The table also showed that ρ value was 0.231 and t-value was 0.312.

The result of the t-test for pre-test showed that there is no significant difference between the experimental group score who was taught by using BBT method and the control group score who was taught by using Direct Instruction method. The statement was proved by the t-value (0.312) which is lower than t-table (2.025) and the ρ value (0.231) is higher than the level of significance (0.05), at the degree of freedom (df) $N-2 = 40-2 = 38$.

b. The T-test result of the Post-test

The researcher then processed the data to measure the significance in the post-test between experimental group and control group using t-test as follows:

Table 4.4
T-test of the Post-test

Group	n	Mean	Std. Deviation	ρ value	t-value	t-table
Experimental Group	20	7.50	1.063	0.015	4.712	2.025
Control Group	20	5.27	1.824			
Total	40					

Source: *Primary Data*

The table 4.8 showed that the result of the t-test at the level of significance (ρ) 0.05 with degrees of freedom (df) = $n - 2$, where $n = 40$ indicated that there was a difference between the mean score of the post-test between experimental group (7.50) and control group (5.27). In addition the t-value was higher than the t-table ($4.712 > 2.025$) and ρ value was lower than 0.05 ($0.015 > 0.05$) which means that the null hypothesis (H_0) was rejected and alternative hypothesis (H_1) was accepted.

Seeing the result above, it can be concluded that the null hypothesis (H_0) is rejected and while alternative hypothesis (H_1) which stated there is a significance difference between students who was taught by using BBT method and students who was taught by using Direct Instruction method is accepted. So, Brain Based Teaching method is effective to develop students' English speaking abilities.

B. Discussion

1. The Improvement of the Students' Speaking Achievement who are taught by using BBT Method

According to the table 4.1, in the pre-test, the students' speaking scores were low especially in grammar, fluency, and vocabulary. The grammar average score was 5.20, the fluency score was 5.53 and the vocabulary score was 5.95. The researcher can assume that the students didn't have passion in learning English. According to the researcher's observation before conducted a pre-test that some of the students' look less energetic about the lesson.

The table 4.1 also showed that in the post-test, the students' average score is improved in every aspect of speaking. The table showed that the grammar average score in the post-test was 7.50, the fluency score was 7.80, the vocabulary score was 8.13, the pronunciation score was 8.38 and the comprehension score was 7.81. The average score was improved about 5% to 44% for each aspect of speaking. The research finding above according to the table 4.1 showed that the students' speaking achievement was highly improved. This findings is related with Jampamoon (2012) who conducted a research about The Effect of Using Brain-Based Learning (BBL) Activities on Prathomsuksa 6 Students' English Speaking Ability. The findings of Jampamoon's research showed the score of students' post-test (10.1143) was higher than the score of the students' pre-test (7.4857).

The researcher can assume that the students enjoyed the lesson which was using BBT method as a treatment. This can be done because the BBT method

is a method that can encourage the students to use English more than they used to do while learning using another method. The finding accorded to Cain and Cain (1991) who suggested the 12 principles of the brain. The brain is a parallel processor and it can perform several activities at once, like tasting and smelling. It means each student has the freedom and alternative choices and improves their weakness.

2. The Improvement of the Students' Speaking Achievement that are Taught by Using Direct Instruction Method

The details about the improvement of the students' speaking achievement that are taught by using direct instruction method can be seen at table 4.2.

The table 4.2 showed that in the pre-test the students' speaking achievement was really low and there is not any significance difference with their achievement in the post-test. The table showed that the improvement of the students' speaking achievement was only improved about 4.45% to 15.76%.

The researcher assumes that the cause of the lower score in the pre-test and in the post-test of the students' speaking achievement that are taught by using direct instruction method are because the students' seemed to be bored and less understand with the lesson. The researcher assumes that this was because the atmosphere and condition of the class that affect students' behavior in learning activity. This accorded with Miller (2011) who stated that more frequently a focus in earlier studies of classroom environment, the physical environment has continued to appear in contemporary studies as an influence on behavioral and academic outcomes.

The researcher also can assume that the teacher factor is also the important cause that can affect the students' achievement. This statement was proved with the students' expressions while in learning process that some of them looked bored and even didn't pay attention to the teacher instruction. This was because the method didn't use such as social learning system as their aspect of learning. This statement was strengthened by Liberante (2012) that stated about Teacher-student relationship have been found to have immeasurable effects on students' learning and their schooling experience.

3. Significance Testing

After conducting a significance testing between the students' who are taught by using BBT method and students' who are taught by using Direct instruction method that can be seen on table 4.3 for the pre-test and table 4.4 for the post-test.

Table 4.3 showed about the significance difference between both classes in the pre-test. The table showed that there is not any significance difference between both classes. This is proved by the mean score of both classes which are not difference with each other. The mean score of the experimental group which are taught by using BBT method was 5.20 and the mean score of the control group which are taught by using direct instruction method was 5.05. The table also showed that the t-value of the pre-test ($t=0.312$) which was lower than t-table (2.025). The researcher can assume that because of both classes using the same learning method by the same teacher, so that the speaking achievement of both classes is not significance difference.

Table 4.4 showed that there is a significance difference between experimental group which are taught by using BBT method with the control group which are taught by using Direct Instruction method. It is proved by the difference of the mean score which was about 2.23 points of difference. The table also showed that the t-value of the post-test (4.712) was higher than t-table (2.025). This t-value proved that null hypothesis (H₀) that stated There is not any significance difference between students' speaking achievement that are taught by using BBT method with the students that are taught by using direct instruction method was rejected and alternative hypothesis (H₁) that stated There is a significance difference between students' speaking achievement that are taught by using BBT method with the students that are taught by using direct instruction method was accepted.

The researcher can assume that the improvement of the experimental group that are taught by using BBT method can be done because of the BBT method that not only can provide the students with many interesting activities but also can make the appropriate classroom atmosphere and interesting lesson material. This is accorded with Khotbantao (2005) that stated about in order to help students practice and improve their speaking ability in the language classroom, teacher should create the appropriate activities and the appropriate atmosphere in the classroom environment, the sitting posture of the students, peripheral learning material, and most importantly, the teacher factor. Khotbantao also stated that the relaxing atmosphere was important factor to help students less stress when they performed speaking activities (Khotbantao, 2005).

CHAPTER V

CONCLUSION AND SUGGESTION

A. Conclusion

After conducting the research, the writer can concludes that:

1. There is improvement between pre-test and post-test scores in experimental group that are taught by using BBT method. It was proved by the students' speaking achievement which is improved about 15.88% to 44.23% on every aspect of English.
2. There is not any significance improvement between pre-test and post-test scores in control group that are taught by using Direct Instruction method. It was proved by the students' speaking achievement of the control group which is only improved about 4.45% to 15.76%.
3. The result of the t-test in post-test between experimental group who was taught by using BBT method and control group who was taught by using Direct Instruction showed that the t-value (4.712) was higher than the t-table (2.025) and p -value <0.05 . So, the null hypothesis (H_0) that stated there is not any significant difference between students who was taught by using BBT method and students who taught by using Direct Instruction method is rejected and *the alternative hypothesis (H_1) that stated there is a significant difference between students who are taught by using BBT method and students who taught by using Direct Instruction is **accepted**.*

B. Suggestion

Brain Based Teaching method is a good method in teaching especially English speaking to students. This method can motivate and encourage the students to be more active in speaking class and also can make the class atmosphere to be more interesting than any other conventional method.

The result of the speaking test on the experimental group shows the improvement after the treatment was conducted. So, the writer would like to give some suggestion as follow:

1. Brain Based Teaching method is a good teaching method in teaching speaking for the tenth graders of Vocational Senior High School students especially to motivate them to learn English. Because of the reason above, the teacher should use it as one of the teaching method in teaching English especially in the competence of speaking.
2. The teacher should make the social bond with their students to encourage the students' to receive any information that the teacher will give to them. The teacher should give reinforcement and praise while students perform or practice their speaking, it would make them become more confident and decrease their shame.
3. There are still many kinds of teaching method that teacher can use to develop and motivate the students to learn English especially in speaking. Hopefully the next researcher can conduct the better research by developing the other kinds of speaking teaching method in teaching learning processes.

Finally, the writer hopes that the result of this research can be useful for the reader. Hopefully, the reader would have more information about the use of brain based teaching method in teaching speaking skill.

BIBLIOGRAPHY

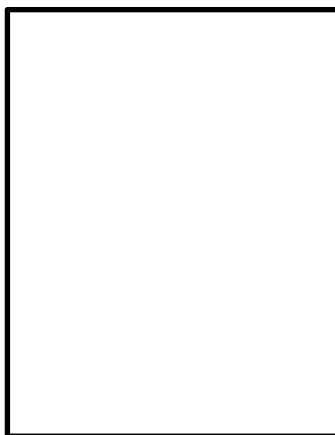
- Basri Dalle, Muh. 2010. *Fundamental of Research Methodology*. Makassar
- Bonsoompan, Orawan. 2007. *Using Brain-Based Learning Activity to Promote English Vocabulary Knowledge and Reading Ability of Prathomsuksa 3 Students*. Published Master's Thesis, Chiangmai University, Chiangmai, Thailand.
- Boss, S. 2011. *Six Tips for Brain-Based Learning*. <http://www.edutopia.org>. Access on August 13, 2013 05:00 pm.
- Bruer, J.T. 1999. *In Search of Brain-Based Education*. Phi Delta Kappan. V:80 N:9 (648-654, 656-657) available online <http://www.pdkintl.org/kappan/kbru9905.htm>
- Caine, R.N., & Caine G. 1991. *Making Connections: Teaching and The Human Brain*. Association for Supervision and Curriculum Development. Alexandria, Virginia.
- Caine, R.N., & Caine G. 1994. *Making Connections: Teaching and The Human Brain*. Menlo Park, CA: Addison-Wesley.
- Caine, R.N. & Caine G. 1997. *Education on the Edge of Possibility*.VA: ASCD. Alexandria
- Caine, G., Nummela-Caine, R., & Cowell, S. 1999. *Mindshifts: A Brain-Based Process for Restructuring Schools and Renewing Education, 2nd Edition*. AZ: Zephyr Press. Tucson.
- Cain, Ranate, et al. 2005. *12 Brain/Mind Learning Principles in Action*. Corwin Press.
- Duman, Bilal. 2006. *The Effect of Brain-Based Instruction to Improve on Students' Academic Achievement in Social Studies Instruction*. Magla University, San Juan, PR. Turkey.
- Dunn, R., & Dunn, K. 1992. *Teaching Young Children Through Their Individual Learning Styles: Practical Approached for Grades K-2*. Allyn and Bacon. Boston.
- Dyck, J. A. 2002. *The Building Environment's Effect on Learning: Applying Current Research*. Montessori Life, 14(1), 53-55.

- Erlauer, L. 2003. *The brain-compatible classroom: Using what we know about the brain to improve teaching*. VA: ASCD. Alexandria.
- Harris, D.P. 1969. *Testing English as a Second Language*. McGraw Hill. New York.
- Irianti, S. 2011. *Using role play in improving students' speaking ability*. Syarif Hidayatullah State Islamic University. Jakarta.
- Jampamoon, 2012. *Improving students' speaking ability through brain-based learning (BBL) method*. Study at Chiangmai University. Thailand.
- Khotbantao, Soontorn. 2005. *Principles of brain-based learning*. Graduated School: Eastern Asia University Press.
- Kommer, D & friends. 2002. *ABC's of Brain-Based Learning*. Inquiry Seminar SP07. Ashland University.
- Liberante, L. 2012. *The Importance of Teacher-Student relationships, as explored through the lens of the NSW Quality Teaching Model*. Journal of Students Engagement: Educational Matters. Australia.
- Mardalis, Drs. 2008. *Metode Penelitian: Suatu Pendekatan Proposal*. Bumi Aksara. Jakarta.
- Miller, A. 2011. *The Physical Environment*. <http://www.education.com/reference/article/classroom-environment>. Accessed on May 8, 2015 04:00PM.
- Montgomery. 2011. *Holistic Speaking Scoring Rubric Extended*. <http://www.rcampus.com> retrieved February 28, 2014 02:00 pm.
- Ornstein, R. 1986. *Multimind: A new way of looking at human behavior*. Anchor Books, Doubleday. New York.
- Pasiak, T. 2007. *Brain-Based Teaching: Merancang Kegiatan Belajar Mengajar yang Melibatkan Otak Emosional, Sosial, Kognitif, Kinestetik, dan Reflektif*. PT. Mizan Pustaka. Bandung.
- Pratiwi, E.B. 2012. *Improving the speaking skill of the tenth grade students at SMA Berbudi Yogyakarta by using video in the academic year of 2011/2012*. Yogyakarta State University. Yogyakarta.
- Richard, J. & Renandya, W. 2002. *Methodology in Language Teaching*. Cambridge University Press. England.

Wongsothorn, A. 1994. *English assessment*. Chulalongkorn University. Bangkok.

APPENDICES

CURRICULUM VITAE



MUH. RAGIL MEIDIPUTRA was born in Ujung Pandang, May 13th, 1989. He is the fifth and the last child of Abd. Muin Hamid and Syarifah Alnurture Effendy. He graduated from SD Muhammadiyah Perumnas Makassar on 2000. He also graduated from SLTP Negeri 33 Makassar on 2004 and registered on SMK Informatika Komputer Mahardika Makassar on the same year and graduated on 2007. On 2009, he registered at English Education Department, the Faculty of Teachers Training and Education, Muhammadiyah University of Makassar and finally finished his study there on 2015.