

THE USE OF MIND MAPPING TECHNIQUE TO IMPROVE
STUDENTS' SPEAKING ABILITY: AN EXPERIMENTAL
STUDY AT CLASS XI IPA OF SMAN 6 MATARAM



A JOURNAL

Submitted as a Partial Fulfillment of the Requirements for Sarjana Pendidikan
(S.Pd) in English Department Faculty at Teacher, Training and Education faculty
Mataram University

By:

FITRIANA AMALIA
E1D 113 059

ENGLISH EDUCATION PROGRAM
LANGUAGE AND ART DEPARTMENT
FACULTY OF TEACHER TRAINING AND EDUCATION
UNIVERSITY OF MATARAM

2017



KEMENTERIAN PENDIDIKAN NASIONAL
UNIVERSITAS MATARAM
FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN
Jajarah No. 62 Telp. (0370) 623873 Fax. 634918 Mataram 83125

JOURNAL APPROVAL

Entitled:

**THE USE OF MIND MAPPING TECHNIQUE TO IMPROVE STUDENTS'
SPEAKING ABILITY: AN EXPERIMENTAL STUDY AT CLASS XI IPA
OF SMAN 6 MATARAM.**

BY:

FITRIANA AMALIA
E1D113059

has been approved in Mataram on 20 December 2017 by:

First Advisor,

Drs. H. Lalu Nurtaat, MA
NIP. 196408131989031002

THE USE OF MIND MAPPING TECHNIQUE TO IMPROVE STUDENTS'
SPEAKING ABILITY: AN EXPERIMENTAL STUDY AT CLASS XI IPA OF
SMAN 6 MATARAM

FITRIANA AMALIA

E1D 113 059

ABSTRACT

This thesis is aimed to find out the effectiveness of Mind Mapping Technique in improving the students' speaking ability at class XI IPA of SMAN 6 Mataram. This study is an experimental study which was conducted at SMAN 6 Mataram.. The subjects of the study were class XI IPA 1 and XI IPA 2 which consists of 39 and 40 students, this method sampling was called purposive sampling technique. The data were analyzed by quantitative method The researcher used this method to solve the students' problem such as less motivation, afraid of making mistakes and hard to say something. In collecting the data, three kinds of instruments were used, those are pre-test, treatment and post-test. The finding showed that, the experimental group show a better improvement than the control group. The result of t-table is 1,71, which was higher than the value of t-test at the homogeneity test of 1,03 at the pre-test and 0,48 at the post-test. The result of normality test of experimental group in pre-test was 2, 87, then it becomes 7,22 after receiving the treatment. It indicates that, the speaking ability was increased 4,35. Meanwhile, the result of normality test of control group in pre-test was 3,23, then it becomes 4,76 without having the treatment. In conclusion, Mind mapping technique was significantly effective to used in improve the students' speaking ability at class XI IPA of SMAN 6 Mataram.

Key words: Speaking Ability, Factors and Students' Problem

PENGGUNAAN TEKNIK PEMETAAN PIKIRAN UNTUK
MENINGKATKAN KEMAMPUAN BERBICARA SISWA: STUDI
EKSPERIMENTAL PADA KELAS XI IPA SMAN 6 MATARAM

FITRIANA AMALIA

E1D 113 059

ABSTRAK

Penelitian ini bertujuan untuk mengetahui efektifitas pada teknik pemetaan pikiran dalam meningkatkan kemampuan berbicara siswa kelas XI IPA SMAN 6 Mataram. Penelitian ini merupakan penelitian eksperimental yang dilakukan di SMAN 6 Mataram. Subyek penelitian adalah kelas XI IPA 1 dan XI IPA 2 yang terdiri dari 39 dan 40 siswa, metode pengambilan sampel dengan cara *purposive sampling technique*. Data dianalisis dengan metode kuantitatif. Peneliti menggunakan metode ini untuk memecahkan masalah siswa seperti kurang motivasi, takut melakukan kesalahan dan sulit untuk mengatakan sesuatu. Dalam mengumpulkan data, tiga jenis instrumen digunakan, yaitu *pre-test*, *treatment* dan *post-test*. Hasil dari analisis menunjukkan bahwa, kelompok eksperimen menunjukkan peningkatan yang lebih baik daripada kelompok kontrol. Hasil t-tabel adalah 1,71, nilai yang lebih tinggi dari nilai t-test pada uji homogenitas 1,03 pada pre-test dan 0,48 pada post-test. Hasil uji normalitas kelompok eksperimen pada pre-test adalah 2,87, kemudian menjadi 7,22 setelah menerima perlakuan. Hal ini menunjukkan bahwa, kemampuan berbicara meningkat 4,35. Sedangkan hasil uji normalitas kelompok kontrol pada pre-test adalah 3,23, kemudian menjadi 4,76 tanpa perlakuan. Kesimpulannya, teknik pemetaan pikiran secara signifikan efektif untuk digunakan dalam meningkatkan kemampuan berbicara siswa di kelas XI IPA SMAN 6 Mataram.

Kata kunci: Kemampuan Berbicara, Faktor dan Masalah Siswa

1. INTRODUCTION

Language is used by people to express their thoughts, opinions and ideas. Language is useful for human life, beside to keep the relationship with each other, it is also used to express their feeling. It is hard to imagine people communicate without language. Speaking is one of the four language skills which should be developed in teaching English. According to Brown (cited in Pebriana: 2015) the term of speaking is an interactive process of constructing meaning that involves producing, receiving and processing information. For many students, learning to speak in English is a priority. They may need this skill for a variety of reasons, such as to exchange the information or to persuade the other people to believe about what they said.

Speaking is a productive skill in English that consists of two main focuses, which are fluency and accuracy. According to Srivastava: 2014 (cited in Firliany: 2016) Accuracy refers to the ability of the learners to produce grammatically correct sentences, in this case the learners should not only know the correct grammatical rules of the language but also able to speak and write accurately. Fluency refers to a level of proficiency in communication. It is the ability to produce written and spoken sentences with easy, efficiency without hesitation.

People need to communicate with the other people to acquire their purpose in speaking. Therefore, people used the language as a device to express their thought. Speaking is one of the most important skills that must be mastered after listening. Someone can deliver a message of one topic to the other people through the process of sharing and exchanging the information. Speaking would be success if a person can convey their opinions with a good idea. The process of

speaking included some aspects such as pronunciation, intonation, fluency and accuracy.

In the observation, the teacher said there are some problems in SMAN 6 Mataram, most of the students were hard to say something. Even though, they had something in their mind but when they delivered their ideas, they were not confidence since they were afraid of making mistakes. Lack of vocabulary, and less motivation in English subject were the reasons. Then, most of the students were not interested in speaking English, they preferred to use their own mother tongue than the target language to speak with their friends. Furthermore, the teacher used conventional method especially to speak during the teaching and learning process.

Speaking skill was still dominated by the teacher and some invented students. Teaching speaking conventionally by asking and answering some questions to the students did not invite the whole students to speak up. Also, during the teaching and learning process especially in speaking subject, a couple of students were asked to memorize the dialogue on their textbook and performed it in front of the classroom. The activity of this classroom was a teacher-centered because mostly the teacher acted and controlled the students without giving the opportunity to express and give their opinions.

Based on the problem above, we need to facilitate the students to learn English easily during the teaching and learning process. The teacher should design good technique to make the students active and creative in the classroom. One of the techniques is Mind Mapping technique. Buzan (2005:1) argued that, Mind Mapping is a very powerful tool for brainstorming, creative thinking, problem

solving and organizing the ideas. By using Mind Mapping, the students understand more about the map and they would learn to speak better. For example, the students write the topic in the middle of the paper. Then, it connects the branch of mind to the central picture. Actually the branches use different ink colors to make students remember easier about the words and also the color used to make mind mapping to be more interesting. Later, the students would practice to speak in front of the classroom based on their mind mapping.

The researcher used Mind Mapping technique to improve students speaking ability at class XI IPA Of SMAN 6 Mataram. Mind Mapping technique is a powerful tool for brainstorming, it helped the students to organize the ideas and of course the students would be able to think creatively, as the result they can solve their problem in speaking skill. By using Mind Mapping, the students understand more about the map that they would speak. During the process of data collection, teacher ask the students to write a topic in the middle of paper. But the topic here based on pictures in order to help the students in arousing an imagination to open their mind. After that, the pictures would connect the branch of mind to the central picture, the branches used various ink colors to make mind mapping become more fun and enjoyable. At last, the students would practice to speak in front of the classroom based on their mind mapping.

Based on the background, the reseacher conducted a research under the tittle “The Use Of Mind Mapping Technique To Improve Students’ Speaking Ability : A Study At Class XI IPA Of SMAN 6 MATARAM ”.

2. REVIEW OF RELATED LITERATURE

Human generally used speaking to communicate by each other in daily interaction. Julis M. Dobsen (cited in Yahya : 2013), speaking is an activity of interchanging information by spoken words. The information transferred and interchange between the speaker and the listener through the conversation.

Beside that, speaking is an oral language proficiency and a complex language skill that involve knowledge and pronunciation, grammar, vocabulary, and culture. Speaking is also used for many purposes, and each purpose involves different skill.

According to Brown (2004) speaking is an interactive process of constructing meaning that involved producing, receiving and processing information. Human generally used speaking as a mean of communication in daily interaction.

Chaney (cited in Pebriana, 2015), speaking is the process of building and sharing meaning through the used of verbal and non verbal symbols in a variety of context. Therefore, at least there are two peoples who are involved in the conversation in order to be able to interchange the information that could have built the same uderstanding based on the conversation they talk about. Although speaking is totally natural, speaking in a language other than our own is anything but simple.

Nowdays, teaching speaking has been undervalued. The english teacher taught speaking just as a repetition of drills or memorizing the dialogues. However, in this era modern the goal of teaching speaking should improve the students communicative skills. That is the best way for students to express themselves and learn how to follow the social and culture rules appropriate in communicative circumstance.

A. The Components Of Speaking

According to Haris (1969) there are several components of speaking that need to be considered. Those components are :

1. Fluency (Fluently and accurately)

Fluency defined as the ability to speak fluently and accurately. Fluency refers to the ease and speed of the flow with which sounds, syllables, words and phrases are join together when speaking. It mean that, when speaker communicate in a conversation with the listener, they can reponse well without any difficulties.

2. Accuracy (Grammar and Pronunciation)

Accuracy focus on the used of grammar and pronunciation. Grammar is the students ability to manipulate the structured and to distinguish appropriate grammatical form in appropriate one which is needed for students to arrange correct sentences in the conversation, while pronunciation refers to produce easily comprehension articulation.

3. Comprehension

Comprehension for oral communication that require a subject to respond the speaker as well as to initiate it. It means that, someone show their comprehend or understand well about the topic if that they can answer or express well and correctly their speaker.

B. Definition Of Mind Mapping

Mind Mapping is the concept which identifies an oral or written text, by the psychologist Tony Buzan in 1960s. The concept of mind mapping is organizes in hierarchy from the most general to the most specific concept. By using mind maapping, we will know where the topic were flow.

On a concept of maps, there are represented by boxes or circles which are joined with lines and arrows. Buzan (2006) argue that, mind mapping is a technique of making outline which used to represent words, ideas, tasks or another link to an arranged radically around central key word or idea by lines and typically it contains by using words, ideas, short phrases or pictures.

Invented by Buzan (2005:1), mind mapping is a very powerful tool for brainstorming, creative thinking, problem solving, organizing of ideas and of course, note taking. Mind mapping as a note taking technique can be used for almost any subject and done in any language. By using mind maps we can recall the concept of mapping that we will used to speak.

Buzan (2006) argue that, mind mapping is an easy way to place information to brain and take the information out from brain, it is creative and effective way to write and will map your mind by a simple way. Mind mapping is good for students, because the more they learn the material, the greater they need to condense and simplify it in a form that is easy to learn.

C. Mind Mapping Technique

Buzan (cited in Elsifa : 2014) argued that, there are 8 techniques in mind mapping, those are:

1. Take a piece of white paper in a landscape position.
2. Start by draw a color image in the centre of the paper and write the keyword with capital letters.
3. Choose a color and draw the main themes of mind map on the thick branches out from the central image.
4. Add other branches to make another main theme.

5. Make thick and colorful branches around the map.
6. Write basic ideas about the keyword and still use the capital letter.
7. Add an image to all the main branches to represent each key theme and also use image to visualize every important keyword on your map.
8. Let your mind map be as imaginative as possible.

3. RESEARCH METHOD

a. Research Design

This research was an experimental research which used two group designs those are : experimental group and control group. Both groups would be given the same kind of tests but the differences are experimental group would be given a treatment and control group would not be given a treatment.

In conducting the research, the researcher cooperate with the English teacher of XI IPA at SMAN 6 MATARAM. The study aims to find out Is Mind Mapping Technique Effective To Improve The Students' Speaking Ability.

b. Population and Sample

According to Arikunto (2006:130), population is the whole research object. The population for this research is class XI IPA of SMAN 6 MATARAM, who are distributed into 4 classes : XI IPA 1, XI IPA 2, XI IPA 3 and XI IPA 4. The total numbers of the population are 163 students, based on the data from the administration office of SMAN 6 MATARAM.

In this research, the researcher used purposive sampling technique. It is a non-probability sample that selected based on the characteristics of a sample and the objective of the study. This experimental study required two classes to be the sample of the study. One is assigned as the experimental group and another is the control group. The researcher choosed class XI IPA 1 and XI IPA 2 as the sample

of the study, because both classes have the same characteristics. The researcher uses class XI IPA 1 as the control group consisting of 39 students, while class XI IPA 2 as the experimental group consisting of 40 students.

c. Data Collection Technique

The researcher used some instruments in collecting the data, such as:

1. Pre-Test

First, the researcher gave pre-test for both experimental group and control group. The test is in oral test, the students were asked to talk about report text and the topic is animal. Each of them had time to talk about 2-3 minutes. The function of giving pre-test is to determine the background knowledge of the students about the topic.

2. Treatment

Second, each group gave the treatment, where the treatment is different. The experimental group explained about the topic and mind mapping technique. In contrast to the experimental group, the control group teach the same topic but it did not use mind mapping technique. The technique used in control group is scientific approach. There are 5 steps in scientific approach: In *Observing*, the researcher raise students' background of knowledge about the topic and explained the materials. Then in *questioning*, the students' were allowed to ask about the materials that they did not understand. In *experimenting*, the students' were created their own paragraph based on the researcher explanation. In *associating*, they were discussed about the ideas of each paragraph with their friend. And the last is in *communicating*, the students' were asked to explain about their work in

front of the classroom. The researcher asked the students to speak in front of the classroom without any specific technique from the researcher.

3. Post-test

In this stage, the oral test gave for both of the groups. The researcher gave the same test as in pre-test. However, the researcher rearrange the test. The result of pre-test and post-test in experimental group and control group were calculated by the researcher and the teacher during the teaching and learning process.

4. The teacher observation sheet

The observations were recorded in every meeting during the implementation of Mind Mapping technique in teaching and learning process. The purpose of recording the observations had a clear description of the existing condition in the classroom and as the sources of reflection for the next meeting. Besides, the teacher also decided the scores of the student.

4. RESULTS

After collected the data, the pre-test and post-test scores of experimental group and control group were computed using the formula above. Here was the result of both groups:

Table 1. pre-test and post-test of experimental group and control group

No	Experimental group			Control group		
	Name	pre-test	post-test	Name	pre-test	post-test
1	GF	42	58	AD	50	75
2	AF	58	75	AN	33	42
3	AL	50	83	AL	42	58
4	AP	33	58	BQA	67	83
5	AM	50	83	CA	42	67
6	AG	33	58	CL	50	67
7	BQA	75	92	CIK	33	42
8	BQW	50	83	DW	33	42

9	DG	58	92	DE	58	67
10	DV	58	92	DWA	42	58
11	DW	67	83	FR	42	58
12	FB	67	83	DK	58	67
13	FR	42	67	GSA	50	75
14	WN	50	75	GSB	33	42
15	EK	58	75	RAI	42	58
16	WY	42	67	ARY	50	67
17	HS	33	58	SR	67	83
18	IN	75	92	KM	42	58
19	IF	67	83	PWA	75	92
20	IT	75	67	PWW	58	75
21	JN	42	75	ID	33	33
22	HZ	33	58	IDN	67	83
23	ML	67	75	IS	42	58
24	MC	67	75	MG	50	67
25	MA	42	67	MA	58	83
26	KD	50	67	MI	67	75
27	ME	58	75	MR	33	42
28	AY	67	75	NM	50	75
29	YS	75	83	KD	67	83
30	RV	42	67	LK	42	58
31	SJ	50	67	LP	75	92
32	SM	42	67	MS	50	75
33	ST	67	83	PE	33	42
34	SV	58	92	RZ	42	58
35	TN	33	58	RC	50	67
36	TS	50	83	SL	67	83
37	WR	58	75	SN	50	67
38	WS	50	75	SY	58	92
39	WY	58	67	SW	58	75
40	YN	67	83			
Sum		2159	2991	Sum	2001	2643

The tabulation above show the score of both groups. It was found that the mean score of experimental group pre-test was almost similar with control group. They were 2159 and 2001. It shows that these two groups had almost the same background of speaking.

After getting and calculating the raw data of both group, the mean score of post-test of experimental group was 2991. It indicated that the mean score was increased 832. Meanwhile, the students of control group were taught without using mind mapping technique, the mean score of post-test was 2643. It indicated that the mean score was increased 642 and it is lower than the post-test of experimental group.

The highest score of pre-test in both group were same, it is 75 and the lowest score was 33. Then, after giving the treatment, the highest score of post-test in experimental group was 92 and the lowest score was 58. On the other hand, the highest score of post-test in control group was 92 but the lowest score was 42. From this data, it can be concluded that the result of students score in experimental group was higher than control group.

4.1 The data computation

The data of deviation and square deviation score of both groups are presented in the tables below :

Table 2. The computation of deviation (dx) and square deviation (dx²) of Experimental group

No	Name	pre-test	post-test	dx	dx ²
1	GF	42	58	16	256
2	AF	58	75	17	289
3	AL	50	83	33	1089
4	AP	33	58	25	625
5	AM	50	83	33	1089
6	AG	33	58	25	625
7	BQA	75	92	17	289
8	BQW	50	83	33	1089
9	DG	58	92	34	1156
10	DV	58	92	34	1156
11	DW	67	83	16	256

12	FB	67	83	16	256
13	FR	42	67	25	625
14	WN	50	75	25	625
15	EK	58	75	17	289
16	WY	42	67	25	625
17	HS	33	58	25	625
18	IN	75	92	17	289
19	IF	67	83	16	256
20	IT	75	92	17	289
21	JN	42	75	33	1089
22	HZ	33	58	25	625
23	ML	67	75	8	64
24	MC	67	75	8	64
25	MA	42	67	25	625
26	KD	50	67	17	289
27	ME	58	75	17	289
28	AY	67	75	8	64
29	YS	75	83	8	64
30	RV	42	67	25	625
31	SJ	50	67	17	289
32	SM	42	67	25	625
33	ST	67	83	16	256
34	SV	58	67	9	81
35	TN	33	58	25	625
36	TS	50	83	33	1089
37	WR	58	75	17	289
38	WS	50	75	25	625
39	WY	58	67	9	81
40	YN	67	83	16	256
Sum		2159	2991	832	692224

Table 3. The computation of deviation (dy) and square deviation (dy²) of Control group

No	Name	pre-test	post-test	dy	dy ²
1	AD	50	75	25	625
2	AN	33	42	9	81
3	AL	42	58	16	256
4	BQA	67	83	16	256
5	CA	42	67	25	625
6	CL	50	67	17	289
7	CIK	33	42	9	81
8	DW	33	42	9	81
9	DE	58	67	9	81

10	DWA	42	58	16	256
11	FR	42	58	16	256
12	DK	58	67	9	81
13	GSA	50	75	25	625
14	GSB	33	42	9	81
15	RAI	42	58	16	256
16	ARY	50	67	17	289
17	SR	67	83	16	256
18	KM	42	58	16	256
19	PWA	75	92	17	289
20	PWW	58	75	17	289
21	ID	75	92	17	289
22	IDN	67	83	16	256
23	IS	42	58	16	256
24	MG	50	67	17	289
25	MA	58	83	25	625
26	MI	67	75	8	64
27	MR	33	42	9	81
28	NM	50	75	25	625
29	KD	67	83	16	256
30	LK	42	58	16	256
31	LP	75	92	17	289
32	MS	50	75	25	625
33	PE	33	42	9	81
34	RZ	42	58	16	256
35	RC	50	67	17	289
36	SL	67	83	16	256
37	SN	50	67	17	289
38	SY	58	92	34	1156
39	SW	58	75	17	289
Sum		2001	2643	642	11836

The researcher calculated the homogeneity test and normality test for two groups to find out whether the hypothesis is rejected or accepted. The researcher divided the analysis into two parts: first is the homogeneity and normality test of pre-test and last is the homogeneity and normality test of post-test. The result of those tests could be found in the table below:

Table 4. The result of homogeneity and normality test

PRE-TEST	POST-TEST	H O M O G E N
Homogeneity test both of groups	Homogeneity test both of groups	
1,03 < 1,71	0,48 < 1,71	
Normality test of experimental group	Normality test of experimental group	
2,87 < 11,070	7,22 < 11,070	
Normality test of control group	Normality test of control group	
3,23 < 11,070	4,76 < 11,070	

Table 5. The result of hypothesis test

$t_{test} = 2,81$ $t_{table} = 1,99$ $t_{test} > t_{table}$ or $2,81 > 1,99$ We can concluded that, the hypothesis is works.
--

5. Conclusion

According to the statistical analysis of t-test, there was a significant difference in speaking mastery of two groups. The experimental group show a better improvement than the control group. The result of t-table is 1,71, which was higher than the value of t-test at the homogeneity test of 1,03 at the pre-test and 0,48 at the post-test. The result of normality test of experimental group in pre-test was 2, 87, then it is become 7,22 after got the treatment. It indicates that, the speaking ability was increase 4,35. Meanwhile, the result of normality test of control group in pre-test was 3,23, then it is become 4,76 without got the treatment. It indicates that, the speaking ability of control group did not increase significantly.

Based on the analysis, the Null Hypothesis (Ho): “Mind mapping is not effective to be used to improve students speaking ability” is rejected, and the Alternate Hypothesis (Ha): “Mind mapping is effective to be used to improve students speaking ability” is accepted. Therefore, mind mapping technique is effective to be used in improve students speaking ability.

REFERENCES

- Arikunto, Suharsimi. 2002. *Prosedur Penelitian*. Jakarta : PT. Rineka cipta. Accessed from: <https://www.doc/91809892/arikunto-suharsimi-2002-prosedur-penelitian-suatu-pendekatan-praktek-edisi-revisi-iv-jakarta-rineka-cipta> on 14 January 2017.
- Buzan, Tony. 2005. *Mind Map At Work*. Jakarta. PT Gramedia Pustaka Utama. Accessed from: <https://books.google.co.id/books?id=ZQ39rCiAVYC&pg=PR4&lpg=PR4&dq=Buzan,+Tony.+2005.+Mind+Map+At+Work.+Jakarta.+PT+Gramedia+Pustaka+Utama.&source> on 14 January 2017.
- Buzan, Tony. 2006. *Buku Pintar Mind Map*. Jakarta. PT Gramedia Pustaka Utama. Accessed from: <http://bukubukusnul.weebly.com/pengembangan-diri/-buku-pintar-mind-map-oleh-tony-buzan> on 18 January 2017.
- Davies, Martin. 2010. *Concept Mapping, Mind Mapping and Argument Mapping: What Are The Differences And Do They Matter*. University of Melbourne, Parkville, VIC, Australia. _ Springer Science+Business Media B.V. 2010. Accessed from: https://www.researchgate.net/publication/225631292_Concept_Mapping_Min_d_Mapping_and_Argument_Mapping_What_are_the_Differences_and_Do_They_Matter on 18 January.
- Elsifa, Gaga Afisena. 2014. *Teaching Reading Narrative Text Through Applying Mind Mapping Technique : An Experimental Study At Second Grade Of SMKN 7 Mataram In Academic Year 2013/2014*. Mataram University. Unpublish Thesis.
- Firliany, Yunita Alivia. 2016. *The Students Strategies In Improving Speaking Skill: Comparative Study At The Grade IX Students Of SMPN 6 Mataram In Academic Year 2014/2016*. Mataram University. Unpublish Thesis.
- Patel, fay., Mingsheng Li., and Prahalad Sooknanan., 2011. *Interculture communication*. Singapore. SAGE Publications Asia-Pacific Pte Ltd.
- Pebriana, Hurnia. 2015. *Improving Students speaking Skill By Using Story telling At Class VIII G SMPN 15 Mataram Academic Year 2014/2015*. Mataram

- university. Unpublish thesis.
- Rahmasari, Risana. 2014. *The Effect Of Using Mind Mapping Technique In Writing Descriptive Text : An Experimental Study At First Year Students Of SMKN 1 Mataram In Academic Year 2013/2014*. Unpublish thesis.
- Riduwan. 2013. *Pengantar statistika*. Bandung. Alfabeta.
- Shastri, Pratima Dave. 2010. *Communicative Approach to The Teaching Of English As A Second Llanguage*. Mumbay: Himalaya Publishing House.
- Sugiono. 2013. *Statistika Untuk Penelitian*. Bandung. Alfabeta.
- Sujana, I Made. 2016. *Integrating A Mind Mapping Technique And Information Gap Activities In Teaching Academic Reading In English*. Mataram: English Education Department Faculty of Education, University of Mataram, Lombok, Indonesia.
- Yahya, Armazi. 2013: *Improving Students Speaking Skills of Class XI IPA 2 SMAN 1 Batukliang academic year 2012/2013 by using fishbowl*. Mataram university. Unpublish thesis.
- Yunus. 2015. Implementasi pembelajaran saintifik 5M. Accessed from: https://www.kompasiana.com/m_yunus/implementasi-pembelajaran-saintifik on 10 september.
- Zulkarnain. 2015. *The Effectiveness Of Using Mind Mapping Technique In Teaching Reading and Writing : An Experimental Research At Second Grade Of Junior High School Salafiah Darul Falah Pagutan Mataram In Academic Year 2014/2015*. Unpublish thesis.