

AN UNDERGRADUATE THESIS

**THE INFLUENCE OF USING SEMANTIC MAPPING ON
READING COMPEREHENSION AT THE ELEVENTH
GRADERS OF SMA MUHAMMADIYAH 1
PURBOLINGGO IN THE ACADEMIC
YEAR OF 2011/2012**



BY:

DENI ANGGA SAPUTRA
STUDENT NUMBER. 0734717

Tarbiyah Departement

English Education Programme

STATE ISLAMIC COLLEGE (STAIN)

OF JURAI SIWO METRO

1432 H / 2011 M

**THE INFLUENCE OF USING SEMANTIC MAPPING TECHNIQUE
ON THE STUDENTS' READING COMPREHENSION AT THE
ELEVENTH GRADERS OF SMA MUHAMMADIYAH 1 PURBOLINGGO
IN THE ACADEMIC YEAR OF 2011/2012**

**Presented as a Partial Fulfillment of the Requirements
For the Degree of Sarjana Pendidikan Islam (S.Pd.I)
In English Education Study Program**

By

**DENI ANGGA SAPUTRA
Students' Number: 0734717**

**Tarbiyah Department
English Education Study Program**

Sponsor : DR. MAHRUS AS'AD, M.Ag

Co-sponsor : MASYKURILLAH, MA

**STATE ISLAMIC COLLEGE
(STAIN) JURAI SIWO METRO
1432 H / 2011 M**

**PENGARUH PENGGUNAAN TEKNIK PEMETAAN ARTI
TERHADAP PENGUASAAN PEMAHAMAN MEMBACA SISWA
DI KELAS XII SMA MUHAMMADIYAH 1 PURBOLINGGO
TAHUN 2011/2012**

ABSTRACT

Oleh:

DENI ANGGA SAPUTRA

Membaca merupakan hal yang sangat penting, karena dengan membaca kita bisa memperoleh informasi yang kita butuhkan dengan mudah, namun dalam prakteknya memahami teks bacaan tidaklah semudah seperti yang kita bayangkan, karena di antara teks-teks bacaan itu, ada yang mudah dipahami dan ada pula yang sulit dipahami, dalam hal ini kita membutuhkan teknik-teknik khusus untuk memahami teks-teks bacaan tersebut, lebih-lebih teks yang di tulis dalam bahasa inggris. Untuk itu penulis mencoba untuk meneliti tingkat pengaruh teknik membaca yang khusus untuk memahami teks bacaan, yang mana dalam penelitian ini peneliti memfokuskan pada teknik memetakan arti.

Tujuan penelitian ini adalah untuk mengetahui apakah penggunaan teknik pemetaan arti dapat berpengaruh terhadap kemampuan penguasaan pemahaman membaca siswa kelas XII SMA Muhammadiyah 1 Purbolinggo. Dalam penelitian ini juga, siswa diberikan test awal (pre-test) sebelum pelaksanaan penelitian dan test akhir (post-test) setelah pelaksanaan penelitian, dan penulis memberikan penjelasan-penjelasan tentang teknik pemetaan arti setelah pelaksanaan pre-test.

Penelitian ini merupakan penelitian kuantitatif dan dilaksanakan di SMA Muhammadiyah 1 Purbolinggo dengan jumlah sample 63 siswa. Teknik sampling yang digunakan untuk pengambilan sample adalah cluster sampling. Dalam pengumpulan data penulis menggunakan metode test. Penulis menggunakan metode test untuk mengukur tingkat kemampuan penguasaan pemahaman teks bacaan siswa dengan menggunakan test pilihan ganda sebanyak 20 soal dalam bentuk test pemahaman bacaan. Untuk mengetahui apakah ada pengaruh dari penggunaan teknik pemetaan arti terhadap penguasaan pemahaman membaca siswa, penulis menganalisis data dengan menggunakan t-test.

Akhirnya data menunjukkan bahwa t_{hitung} 2.582 lebih besar daripada t_{table} 1.990 oleh karena itu dapat disimpulkan bahwa H_1 diterima dan H_0 ditolak. Hal ini berarti bahwa ada pengaruh yang signifikan dari penggunaan teknik pemetaan arti terhadap penguasaan pemahaman membaca siswa kelas XI SMA Muhammadiyah 1 Purbolinggo.

**THE INFLUENCE OF USING SEMANTIC MAPPING TECHNIQUE
ON THE STUDENTS' READING COMPREHENSION AT THE
ELEVENTH GRADERS OF SMA MUHAMMADIYAH 1 PURBOLINGGO
IN THE ACADEMIC YEAR OF 2011/2012**

ABSTRACT

Oleh:

DENI ANGGA SAPUTRA

Reading comprehension is the important one, because by reading we can get much information we need easily, but the fact, to comprehend text is not easy. We need special technique in reading comprehension. Therefore, the researcher tried to investigate special technique which in this research the researcher focused to the use of semantic mapping technique.

The objective of this research is to investigate whether the use of semantic mapping technique influence on the students' reading comprehension at the eleventh graders of SMA Muhammadiyah 1 Purbolinggo. Subject in this research were eleventh graders. In this research, the students were given pre-test before conducting of research without giving treatment and post-test after conducting of the research and the researcher gave treatment after conducting the research.

This research is quantitative research and conducted at SMA Muhammadiyah 1 Purbolinggo with the sample 63 students. Cluster sampling is used to determine the sample. In data collecting method the researcher applied test method. The researcher used test to measure the level of students' reading comprehension. To know the level of the students' reading comprehension the researcher used multiple choice tests which consist 20 items in reading comprehension text form. To know whether there is influence of using semantic mapping technique on the students' reading comprehension the researcher analyzed the data by using t-test.

Finally, the data indicated that " t_{observed} " is 2.582 is bigger than " t_{table} " is 1.990. Therefore, it can be concluded that H_i is accepted and H_o is rejected. It means that there is a positive and significance influence of using semantic mapping technique on the students reading comprehension at the eleventh graders of SMA Muhammadiyah 1 Purbolinggo.

HALAMAN ORISINAL PENELITIAN

Yang bertanda tangan di bawah ini:

Nama : DENI ANGGA SAPUTRA

NPM : 0734717

Program Studi : Pendidikan Bahasa Inggris

Menyatakan bahwa skripsi ini secara keseluruhan adalah hasil penelitian saya kecuali bagian-bagian tertentu yang dirujuk dari sumbernya dan disebutkan dalam daftar pustaka.

Purbolinggo, Desember 2011
Yang menyatakan,

DENI ANGGA SAPUTRA
NPM.0734717

STATEMENT OF RESEARCH ORIGINALITY

The Undersigned:

Name : DENI ANGGA SAPUTRA

Students' Number : 0734717

Study Program : English Education

States that this undergraduate thesis is original the result of the writer's research,
in exception of certain parts which are expected from the bibliography mentioned.

Purbolinggo, Desember, 2011
The Researcher,

DENI ANGGA SAPUTRA
NPM.0734717

MOTTO

ن وَالْقَلَمِ وَمَا يَسْطُرُونَ ﴿١﴾

“Nun. By the Pen and the (Record) which (men) write,-”

(Q. S Al QOLAM : 1)

أَقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ ﴿١﴾

Proclaim! (or read!) in the name of thy Lord and Cherisher, Who

created- (Q. S Al- 'Alaq : 1)

“If you can DREAM it, you can DO it.”

(Walt Disney)

DEDICATE PAGE

This piece of work is dedicated to:

My beloved father (Ayah M. KARIM) and mother (Mama Neni Nurmalita), also my beloved sister (Uwo Ophie, Dek Iin, Dek Nita) for loving, carrying, praying and great support to finish this paper.

All of the lecturers who had been guided me.

The English teacher of the eleventh graders of SMA Muhammadiyah 1 Purbolinggo who has given valuable guidance, advice, helps and time during the research.

All of the my friends at STAIN Metro

My beloved lecturers in the Campus

The big family of IMM STAIN, IMM Metro, IMM Lampung

My beloved Almamater

May Allah SWT Bless Us

Aamiin ya Rabb.

ACKNOWLEDGEMENT

Praise is only to Allah SWT, the lord of the universe, the inspiration of her life, that the researcher finally can finish the research proposal entitled “THE INFLUENCE OF USING SEMANTIC MAPPING TECHNIQUE ON THE READING COMPREHENSION AT THE ELEVENTH GRADE OF SMA MUHAMMADIYAH 1 PURBOLINGGO IN THE ACADENIC YEAR OF 2011/2012”. This thesis is arranged as fulfillment of the requirement for the degree of Sarjana Pendidikan Islam (S.Pd.I) in English education study program of STAIN JURAI SIWO METRO.

In this arrangement, the researcher realizes that has tried as hard as he can, remembering the limitation of the writer’s knowledge and experience. The researcher realize that this thesis still has many decrease, so a development critic is hoped by the researcher in the further writing complication. This thesis would be able accomplished without any help and support from many helpful individual. In this chance, the researcher would like to sincerely acknowledgement his gratitude.

The first of all, the deepest gratitude would be addressed to his beloved parents, M. Karim and Neni Nurmala for their endless love, for understanding and supporting his to finish the thesis soon, and always pray for his to be a successful person someday (aamiin). Secondly the researcher

would like to say thanks to all of his beloved friends who always supports and helps the writer to finish the thesis.

The greatest gratitude would also be addressed to both of her advisors, DR. Mahrus As'ad, M.Ag, and Masykurillah, S.Ag, who have constantly given their endorsement, time and guidance so that the researcher could finish the thesis.

The researcher is indebted to Mrs. Khoirunnisa, the English teacher of SMA Muhammadiyah 1 Purbolinggo for her support, moreover to Mr. Sedono, S.Pd, M.Pd, who gave permission to conduct the research at SMA Muhammadiyah 1 Purbolinggo. Also for the students` who is sitting at the Eleventh graders of SMA Muhammadiyah 1 Purbolinggo in the Academic Year 2011/2012 who help his in carrying out the study.

Hopefully, this thesis can give many advantages to all of us properly.

Metro, Desember, 2011
The Researcher

DENI ANGGA SAPUTRA
St.Number 0734717

TABLE OF CONTENT

TITLE	i
ABSTRACT	ii
APPROVAL PAGE.....	iv
NOTA DINAS.....	v
RATIFICATION PAGE.....	vi
STATEMENT OF RESEARCH ORIGINALITY.....	vii
DEDICATION PAGE.....	viii
MOTTO.....	ix
ACKNOWLEDGMENT.....	x
TABLE OF CONTENT.....	xii
LIST OF TABLE	xiv
LIST OF FIGURES.....	xvi
CHAPTER I INTRODUCTION	
A. Background of the study.....	1
B. Problem identification.....	5
C. Problem Limitation.....	5
D. Problem Formulation.....	5
E. Objective and Benefit of the study.....	6
CHAPTER II THE REVIEW OF RELATED THEORY	
A. Theoretical review	7
1. Semantic mapping.....	7

a.	The concept of semantic mapping.....	7
b.	The uses of semantic mapping.....	9
c.	The Procedure of semantic mapping.....	11
d.	The advantages and disadvantages of semantic mapping.....	14
2.	Reading Comprehension	
a.	The concept of reading.....	15
b.	Reading comprehension.....	16
c.	Factors in reading comprehension.....	19
3.	The influence of semantic mapping technique On reading comprehension.....	20
B.	Theoretical framework and paradigm	
1.	Theoretical framework.....	21
2.	Paradigm.....	22
C.	Hypothesis formulation.....	23

CHAPTER III RESEARCH METHODOLOGY

A.	Research design.....	24
B.	Population and Sampling technique	
1.	Population.....	24
2.	Sampling technique.....	25
C.	The operational definition of variables	
1.	Independence variable.....	26
2.	Dependence variable.....	27
D.	Data collection method	
1.	Test.....	28

2. Documentation.....	28
3. Observation.....	29
E. Research instrument.....	29
F. Data analysis technique.....	32

CHAPTER IV RESULT OF THE RESEARCH

A. Descriptive of Data	
1. Research Setting.....	33
2. Research Variable Data.....	36
a. Semantic Mapping	36
b. Reading Comprehension.....	37
B. Hypothesis Testing.....	48
C. Interpretation.....	52
D. Discussion.....	53
E. Limitation.....	54

CHAPTER V CONCLUSION AND SUGGESTION

A. Conclusion.....	56
B. Suggestion	57

BIBLIOGRAPHY

APPENDICES

CURRICULUM VITAE

LIST OF TABLES

Table	Page
1. Table of the result of data pre survey	3
2. Table of the total population	23
3. Table of the calculation of analysis item	33
4. Table of the calculation of reliability test	36
5. Table of the number of Infrastructures SMA Muhammadiyah 1 Purbolinggo.....	44
6. Table of the frequency distribution of students' score in pre-test	47
7. Table of the frequency distribution of students' score in post-test.....	48
8. Table of the authentic differences between pre-test and post-test.....	50
9. Table of the result of data out put from SPSS	52

LIST OF FIGURES

1. Figure of the paradigm	20
2. Figure of the diagram of pre-test result.....	47
3. Figure of the diagram of post-test result	49
4. Figure of the structure organization of SMA Muhammadiyah 1 Purbolinggo	24
5. Figure of SMA Muhammadiyah 1 Purbolinggo sketch.....	51

CHAPTER I

INTRODUCTION

A. Background of the Study

English as an international language that plays important role in communication. Communication does not only take place with two or more speakers, but also it takes place between a speaker and a text. There should be a kind of interaction between the learner (reader) and the text which is being read in order to be good readers.

Learner should probably develop reading comprehension skill much like learning to drive. Reading comprehension becomes so automatic that most skilled readers forget that they had to develop their reading comprehension skill. Learning reading comprehension requires a strategy where lesson plans progressively develop and reinforce reading comprehension skill, but a student does not seem to really get it by reading; this means that the student is successfully decoding words, but decoding without reading comprehension will not get him far.

Reading comprehension involves much more than readers' responses to text. Comprehension, understanding of what we read is the whole point of reading, but the process of comprehension is not understood by all teachers. In reading comprehension have three factors involved the reader's prior knowledge, knowledge of text structure, and an active search of information.

Learners comprehend better when they see the text organized in such away which can easily be understood, and which indicates the relations between the ideas. One of the ways that may have a significant impact on the teaching reading process is the semantic mapping strategy. Semantic mapping is one way to explain how to categorize word meanings. Semantic maps provide the additional benefit of helping students visualize how word meanings can be categorized. Mapping is also an effective technique for teaching reading skill and textual patterns of organization, and it is effective for improving note taking and creative thinking skills.

There are three places in a lesson where semantic mapping may be used: as a pre-assignment strategy to activate students' prior knowledge or to help the teacher in assessing the students' readiness to do the assignment; as a strategy to allow students to record what they are learning

during the assignment; and as a post-assignment strategy to allow them to integrate or synthesize what they have studied.

Semantic mapping in reading comprehension are taught to build up relations between the terms in such a text. Analyze the concepts and vocabulary in the text. The concept used is central to the line. Semantic mapping help to visualize the relationship among ideas. The learner with limited prior knowledge may respond best because they start out on global basis and move to specific.

Moreover, when they read in their own language most students know what they are reading, when they read a text that written in foreign language many students get troubles in comprehending an English text, because they must master both the vocabularies and also need effective technique in comprehending a text. Therefore, the researcher interested in researching semantic mapping whether it can be a good technique in reading comprehension.

Based on the pre-survey on September, 12th 2011 the researcher got the data of reading comprehension at the eleventh graders of SMA Muhammadiyah 1 Purbolinggo as follow:

Table 1
Students English result

N O	Score	Explanatio n	Frequenc y	Percentag e
1	0 – 50	Poor	48	32%
2	51 – 69	Fair	58	36%
3	70 – 79	Good	33	20%
4	80 – 100	Excellent	20	12%
Total			159	100%

Source: The result of the teacher archives, taken on September, 12th 2011

The English standard value in this school is 70 so from the data above, it can be known that the students English result is low. From the 159 students, there are 48 students (32%) who got the poor score. There are 58 students (36%) who got the fair score; there are 33 students (20%) who got the good score; and 20 students (12%) who get excellent. And after having an interview the researcher finds some cases in teaching English especially on reading subject, such as (1) most of students do not know how to read well. (2) Students are lazy to read English texts other than their school textbooks. (3) The students are not interested in the reading materials. (4) They do not learn the technique for reading. And (5) most of them get low score in reading comprehension exercises. The problem may due to the way they used to follow while reading. They read the text as if it is consisted of discrete elements. Students do not interact with the passage they read, nor they build relationships between the terms

in the text to build up the meaning, and then to lead themselves toward reading comprehension. Students are not aware of the strategies that may help them in reading, because they are not taught to do so nor are they immersed in reading activities to follow such strategies.

The main concern of this study is to determine the effect of using semantic mapping on the students' reading comprehension, and to introduce students how to use this strategy in reading through teaching them how to build up the structure of the maps. The semantic mapping technique as being used to motivate and involve students in the thinking, reading, and writing aspects. It enhances vocabulary development by helping student link new information with previous experience.

Base on the problem above, the researcher would like to investigate whether there is the influence of using semantic mapping on reading comprehension at the eleventh graders of SMA Muhammadiyah 1 Purbolinggo.

B. Problem Identification

Based on the background above, the researcher could identify the problem as follows :

1. The students do not know how to read well.
2. The students are not interested in the reading materials.

3. The students are lazy to read an English text.
4. The techniques which are used in the learning process are boring.
5. Most of students get low score in reading comprehension exercises.

C. Problem Limitation

To avoid misunderstanding in this research that will be done, the researcher limits the problem only in the influence of using semantic mapping on the Students' Reading Comprehension. This research was held at the eleventh graders of SMA Muhammadiyah 1 Purbolinggo, in the academic year of 2011/2012.

D. Problem Formulation

Based on the background of the study and the result that has mentioned, the problem formulation in this research was: "Is there any positive and significant influences using semantic mapping on the students' reading comprehension at the eleventh graders of SMA Muhammadiyah 1 Purbolinggo?"

E. Objectives and Benefit of the Study

At the end of this research the researcher hoped that it could have some advantages to the broaden teaching and learning process.

- a. The Objectives of the Study

Finding out the influence of the using of Semantic Mapping On The Students' Reading Comprehension.

b. The Benefit of the Study

a.) The researcher hopes that it could be a substance reference for the teacher of foreign language in their teaching, so they can raise the maximal learning result.

b.) Practically, the researcher hope that this research can be useful, especially for the english teacher at the eleventh graders of SMA Muhammadiyah 1 Purbolinggo, as one of the best effort to increase the student English learning result.

CHAPTER II

THE REVIEW OF RELATED THEORY

A. Theoretical Review

This chapter contain the theories which support the research, it include the more explanation of semantic mapping and reading comprehension.

Therefore, the researcher tried to explain all of those items as bellow:

1. Semantic Mapping

a. The Concept of Semantic mapping

In Oxford Advanced Learner's Dictionary the word of semantics is defined as branch of linguistics concerned with studying the meanings of words and sentences.¹

Semantic is the technical term used to refer to the study of meaning, and, since meaning is a part of language, semantics is part of linguistic.² The sense of mean is basically as a form of cognitive knowledge in the language and structured in language that is understood by the system of more or less equally by speaker in the communication and activities in generally and normally.³

¹ A.S, Hornby, *Oxford advance learner's dictionary*, Oxford University Press., New York. p.775

² E.R. Palmer, *Semantic second edition*, Cambridge university pers. 1981

³ Hasan Alwi and Sugono, *Telaah bahasa dan sastra*, Pusat Bahasa. 2002. p.112

About mapping, Novak and Gowin argue that concept mapping are graphical tools for organizing, representing, and sharing knowledge.⁴ It mean that semantic mapping is a strategy for graphically tools of study knowledge to representing a conceptual relationship meaning.

Saule Raiziene and Bronislava Grigaite state that semantic mapping is a cognitive strategy in which information is categorized structure in a graphic or visual form.⁵ It means that semantic mapping is easy strategy to visually organize of information with drawn graphic.

In addition, Ernest state that semantic mapping contains nodes, drawn as circles, squares, triangles, each of which contains key words.⁶ It means that semantic mapping is technical term used to categorization of concepts and representation of those concepts by classifications in visual knowledge with drawn circles, square, and triangles, which contains key words.

Moreover, Heimlich and Pittelman explain that semantic mapping is graphic displays of words meanings that offer students a visual

⁴ http://webserver.ignov.ac.in/institute/stride_Hb8_webcd/chapter22.pdf

⁵ Edgar Krull, *Theory and practice in today's teacher education*, Trames; Journal of the Humanities and Social Sciences, Vol 9, No 2, 2005. p.192

⁶ Ernest Balajthy, *Struggling readers: assessment and instruction in grades k-6*, The Guilford Press. 2003

representation of how words and concepts are related through a network of organized knowledge.⁷

Based on the quotations above, it can be inferred that semantic mapping is a graphic arrangement showing the major ideas and relationships in text or among word meanings designed to graphic and visual relationship of concepts or ideas. The semantic mapping has essentially two aspects: visual and conceptual. A visual semantic map is made up of forms, such as circles, triangles, etc. A conceptual semantic mapping contains verbal information inside and between the forms, which represents relationship between words or ideas. Thus semantic mapping is one way of representing and communicating one's understanding of concepts.

b. The Uses of Semantic Mapping

Semantic mapping is designed to have students prepare and share new knowledge of the words, phrases, sentences, paragraphs, text, or discourse they have learned with a partner, other groups, or individuals during centers'.⁸ It means that semantic mapping strategies presented here can be used with individuals, small groups, or even the entire

⁷ Patricia A. Antonacci and Catherine M. O'Callaghan, *40 Strategies for Middle and Secondary Classrooms*, Developing Content Area Literacy. 2011

⁸ Killie Buis, *Making words stick: strategies that build vocabulary and reading comprehension in the elementary grades*, Library and Archives. Canada. 2004

class. Semantic mapping can also be introduced by inviting students to write important information on separate index cards, slips of paper, or sticky notes.

There are various map structures that people are used to representing and organizing their knowledge. A simple concept map creates semantic web from a simple idea or simple concept. Figure 1 shows a semantic map created with third graders who were preparing to read an article about the uses of pine trees. Ovals represent the concepts, and lines with narrows and words above them represent the relationship. The relationships depicted on a map can be a *class* (pine trees), *example* (white pine), or *property* (needles).

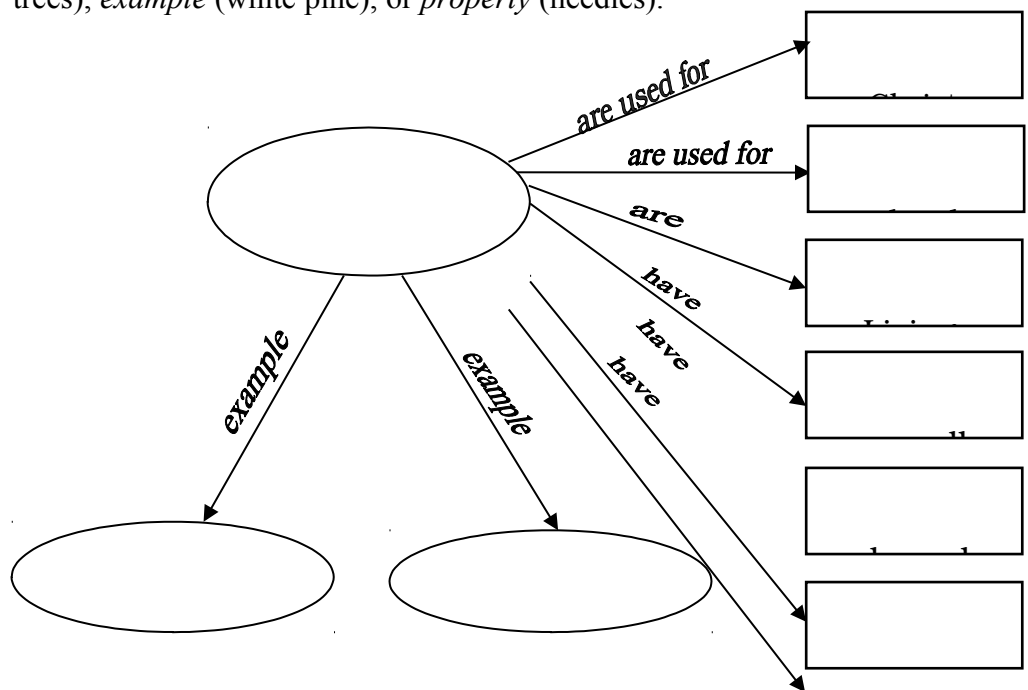


Figure 1 ⁹

Semantic mapping as visual categorization of information serve a number of purposes. First, if one person show to another how relationship between may be represented using semantic mapping, she or he reveal to categorize, relate, and organize ideas.¹⁰ It mean that semantic mapping help students develop prior knowledge by seeing the relationships in given topic. And also helps students to visually organize information and can be an alternative to note taking and outlining.

When teach the process of mapping to students many times before they can do it independently. Model step by step process during the read aloud or picture study before having students work with them independently as a centre activity. Some students will need only a few demonstrations to be able to create a map from key words of a story of their choice. Other will need many examples and a carefully selected level of text to be successful. When create a map, use words the

⁹ J. David Cooper and Nancy D. Kiger, *Literacy: Helping Students Construct Meaning*, p.102

¹⁰ Edgar Krull, *op.cit.*, p.193

students are familiar with. And they can apply their semantic mapping to more challenging vocabulary.

c. The Procedure of Semantic Mapping

The semantic mapping strategy is most effective when it is used before, during, and after reading and when teacher serves as the guide or facilitator to the students who construct their own semantic mapping. Therefore, this step by step procedure is designed for using semantic maps as strategy at different phases of reading informational text.¹¹

a. Before Reading

Prior to reading the text, the teacher examines the text to be read and carefully selects the key words to be learned that are critical for understanding the text and the lesson.

1. The teacher introduces the selected content words using the semantic word map and guided discussion.
2. Using chart paper, the blackboard, or software program with graphics tool, draw or project the word map so that it is visible to the students. Write the topic or main concept in the center of the map.
3. Distribute semantic maps to the students.
4. Begin the pre reading discussion that focuses on the content words. As students respond to concept-related questions, write the word and student's meanings and response on the map and direct students to do same.
5. When students fail to respond to the concept related questions, the teacher should offer a contextual definition of the word that facilitates students' understanding of the text.¹²

¹¹ Patricia A. Antonacci and Catherine M. O'Callaghan, *Op.cit.*

¹² Patricia A. Antonacci and Catherine M. O'Callaghan, *Op.cit.*

b. During Reading

As students read, they use their semantic maps to add to the meaning of the words

1. Before directing the students to read the assigned text, the teacher provides a quick review of the key words.
2. The teacher instructs students to add additional information from their readings to clarify the meanings of the key words. She encourages the students to note additional words that further explain the ideas from their readings.
3. As students read, the teacher reminds students to write down questions about words that need classification.¹³

c. After Reading

The teacher engages students in an extended discussion on their readings, focusing on the content words and their meanings

1. The teacher directs the students to use their semantic maps during the discussion of their reading. She engages students in a discussion that further promotes and deepens their understanding of the content words by building on their conceptual knowledge.
2. As the students discuss the reading and use the map as their guides, the teacher directs them to clarify the information that they gleaned from their readings.
3. The teacher guides the discussion with questions that will help students to further understand what they have read. As the students respond to the questions, the teacher notes their responses on the large semantic map as they take additional notes on their own maps.¹⁴

¹³ Patricia A. Antonacci and Catherine M. O'Callaghan, *Op.cit.*

¹⁴ Patricia A. Antonacci and Catherine M. O'Callaghan, *Op.cit.*, p.20

Based on explanation above, it can be known that when semantic mapping is used as pre reading strategy, its help to activate student's prior knowledge. Further, the teacher may use the students' pre reading semantic maps to determine how much knowledge building is required before students read the text. When semantic mapping as a post reading instructional strategy, teachers guided students' discussions to help them recall and organize information that they have learned from reading text as they make connections to words or concepts related to the topic.

d. The Advantages and Disadvantages of Semantic Mapping

Maps are useful for describing we already know about a subject. It can help to improve the transfer of knowledge for one area or discipline to another and teacher created maps can be especially helpful in getting an overview of a topic or even a whole course.

Semantic maps provide the additional benefit of helping students visualize how word meanings can be categorized. Mapping is also an effective technique for teaching reading skill and textual patterns of

organization, and it is effective for improving note taking and creative thinking skills. Semantic maps as a strategy to allow students to record what they are learning during the assignment. The semantic mapping technique as being used to motivate and involve students in the thinking, reading, and writing aspects. It enhances vocabulary development by helping student link new information with previous experience

However mapping is an acquired skill, which can take a several hour of training before we are able to use it. It is not necessarily an intuitive. Semantic maps providing students with a systematic means to integrate their new knowledge with their prior understanding, activating students prior knowledge and stimulating them to use that knowledge to interact with the text and promoting semantic mapping as a pre reading activity that encourages students to map out their ideas. It need several time to teach it.

2. Reading

a. The concept of Reading.

Anthony, Pearson, and Raphael in Thomas's book state that "reading is the process of constructing meaning through the dynamic interaction among the reader's existing knowledge, the information

suggested by the written language, and the context of the reading situation”.¹⁵

Reading English text is important for us, because by reading, the students get knowledge and information, but, for having a good reading is not easy thing, the student need more understanding about main ideas of the reading text. after reading a lot of books about reading, it can be found find that there are many expert who define reading based on their own research. Reading is the meaningful interpretation of printed or written verbal symbols.¹⁶

Based on that statement above, reading is not only read, but also needs thinking and our language skills, moreover, reading (especially for English text) without using that skill, someone will get misunderstanding in comprehending what the author message on the reading.

The purpose of reading activity is looking at the text and trying to understand its message, so that the reader can catch the explicit and implicit information from the reading text, the complex processes involved in reading comprehension are divided into three categories.

¹⁵ Thomas S.C Farrell, *Planning Lessons for a Reading Class* (Singapore: SEAMEO Regional Language Centre,2002), p.1

¹⁶ Albert J. Harrs and Edward R. Sipay, *How To Increase Reading Ability.*, p.12

The categories include vocabulary instruction, text comprehension instruction, and teacher preparation and comprehension strategies instruction.¹⁷

In fact to gain the aim of reading comprehension is not done by the student only, but the English teacher have play to play a part a facilitator and motivator to guide the student to comprehend the English reading passage that is thought by the teacher because it is impossible for the student to master this ability without helping from the English teacher.

Hence, the English teacher have to give the reading material step by step, from easy into medium material then complicated material.

b. Reading Comprehension.

In Oxford Advanced Learner's Dictionary the word of comprehension is defined as:¹⁸

- (1) the mind's act or power of understanding.
- (2) an exercise aimed at improving or testing one's understanding of a language (written or spoken).

¹⁷ <http://www.literacy.uconn.edu/compre.htm#vocab>

¹⁸ A.S, Hornby, *Oxford advance learner's dictionary*, Oxford University Press., New York. p.174

According to Adams and Bruce, Comprehension is the use of prior knowledge to create new knowledge; for without prior knowledge written material would be meaningless.¹⁹ Comprehension is understanding new information in light of what the teacher already know.²⁰ Its mean that the same process is at work when the students try to make sense of what they read, the student use the words on the page of trigger their existing knowledge of whatever the word refer to, and in doing so, the student often supply as much information as the words on the page do, its mean that reading comprehension is the search for meaning, actively using the students' knowledge of the world and of texts to understand each new thing that the student read.

To comprehend text is not something easy, but the readers need strategies when reading comprehension process. If they have strategies to comprehend text, they will be easier to comprehend. Not only strategies the students need, but also skill is role in this case. The students must practice in reading comprehension, because it can development their brain in thinking.

A lot of the reading comprehension strategies that have been associated with the highest effect sizes for students with learning

¹⁹ Albert J. Harrs and Edward R. Sipay, *Op.cit.*, p.480

²⁰ Gillet Jean Wallace and Temple, Charles, *understanding reading problems*. P. 35.

disabilities are those that teach students strategies that prompt them to monitor and reflect before, during, and after reading. These strategies ask students to (1) consider their background knowledge on the topic they are reading, (2) summarize key ideas, and (3) self-question while they read.

In teaching learning process, there must be comprehension monitoring, referring to a reader's internal monitoring, as the reader goes along, of whether what is being read makes sense. Effective readers continually monitor their own comprehension; they know implicitly that reading is supposed to make sense, and they mentally keep track of whether it does or not as they process. This is a deferent from typical comprehension teaching, in which the teacher takes responsibility for monitoring and judging the adequacy of readers' comprehension. Typically, the teacher ask question during and after the reading and use the responses given to decide if a reader's comprehension is adequate.²¹

From these statements, it can be understood that the indicators of reading comprehension are 1) questioning the student about what they have read is the most extensively used form of comprehension guidance. 2) The students need to actively process what they read to

²¹ Ibid, p. 299.

reach successful of reading comprehension. 3) To reach successful reading comprehension, the readers must have skills in reading and fluency, the readers need to master of vocabulary because vocabulary is an important factor in reading. Without mastering of vocabulary, the readers will not know meaning of text, and also background knowledge is role.

c. Factors in Reading Comprehension

Reading is an interactive process involving what is in the reader's head and what is on the printed page.²² Reading comprehension involves much more than readers' responses to text. In reading comprehension have two factors involved the reader's prior knowledge, and text coherence and structure.

a. Prior Knowledge

Prior knowledge is defined as all information an individual has in her or his long-term memory.²³ Prior knowledge is an important factor that the readers must have in reading to get new information. Moreover, according Adams and Bruce, "comprehension is the use the prior knowledge to create new knowledge, without prior knowledge, written material would be meaningless".²⁴ It means that

²² Albert J. Harris and Edward R. Sipay, *Op.Cit.*, p.479

²³ Albert J. Harris and Edward R. Sipay, *Op.Cit.*, p.480

²⁴ Albert J. Harris and Edward R. Sipay, *Op.Cit.*

prior knowledge is very important in reading to get meaning of passage.

b. Text Coherence and Structure

The readers and how text is written should be attention in reading comprehension. A good text, there is relationship between one paragraph and another that has logical connection and coherent, so the readers can comprehend text easily.

Text structure has purpose involved how the ideas in a text are interrelated to convey the author's message to the reader. Text structure specifies the logical connection among ideas. Text structure may be analyzed at three primary levels: 1). the sentences level, 2). the paragraph level, 3). the top level structure.²⁵ It means that text structure has logical connection among ideas in order to the readers can understand the author's purpose.

3. The influence of Semantic Mapping on Reading Comprehension

Lim et. all state that the use of semantic maps allows the learner to create an understanding of the world by making connection, by creating links, by exploring and testing links, a basic process of all creative thinking.²⁶ Using semantic maps is a popular technique among reading

²⁵ Albert J. Harris and Edward R.Sipay, *Op.Cit.*, p.485

²⁶ Lim et.all, *Early Child Development and Care*, Hongkong institute of education, 2003

teachers. The maps improve students' reading comprehension by showing them not only how vocabulary words are related to each other in some conceptual, but also how the ideas in texts are organized in associative ways. Mapping is a cognitive strategy that the teacher conceptually organizes the text for student use.

Moreover, Antonacci state that semantic maps are most effective when (a) they are used with teacher guided discussion before, during, and after reading a text; (b) teacher select a few critical key words to be taught; and (c) students are actively engaged in constructing their word maps through participating in lively discussions on the conceptual nature of words.²⁷

B. Theoretical Framework and Paradigm

1. Theoretical Framework

According to Edi Kusnadi, theoretical Framework is a tentative statement about indication which becomes object of problem in the research".²⁸

Therefore in this research, there are two variables; Independent Variable (X) and Dependent Variable (Y). Independent Variable as influencing variable is semantic mapping, and Dependent variable as an effect variable is the student reading comprehension.

²⁷ Patricia A. Antonacci and Catherine M. O'Callaghan, *Op.cit.*

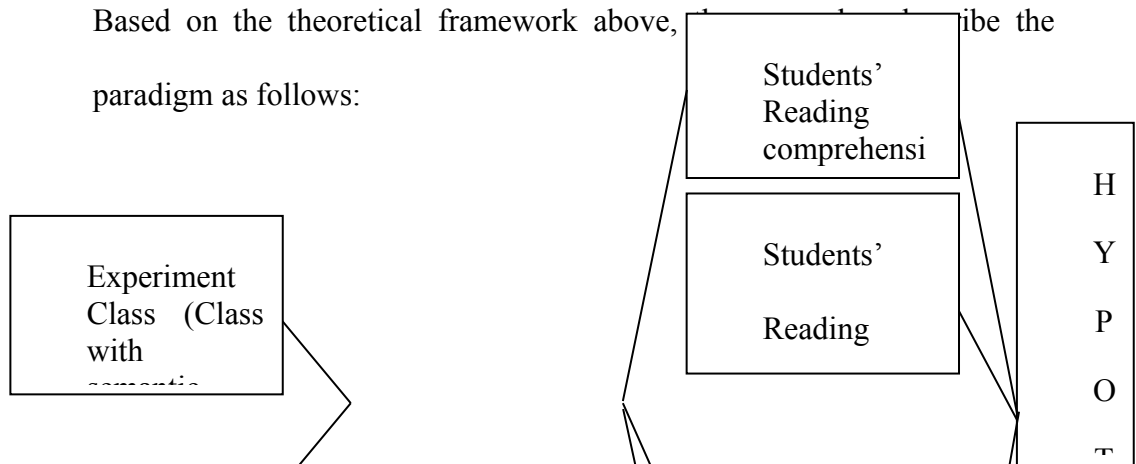
²⁸ Edi Kusnadi, *Methodologi Penelitian*, Metro:STAIN Metro, 2008, P.57.

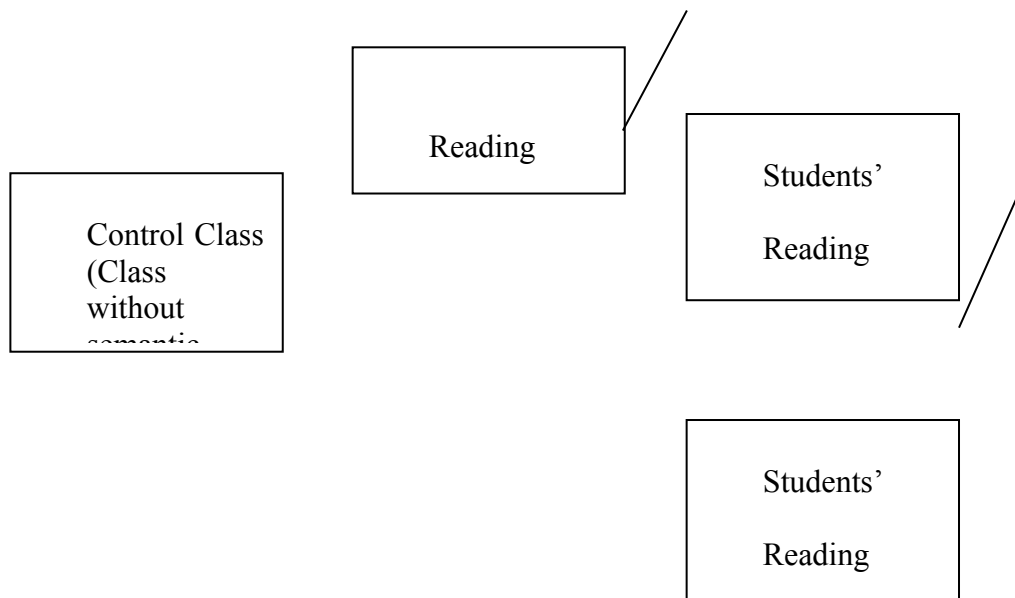
Semantic mapping is a process or a method about how to understanding a student reading text with visualizing word meaning. It is communicative language teaching. The teacher may lead a semantic mapping activity prior to reading to introduce key terms, activate prior knowledge, and as a reassessment. Alternatively, semantic maps may also be used after reading to summarize and review key terms and ideas and to informally assess student understanding.

Therefore the implementation of semantic mapping in teaching learning is strongly needed and the student or the learner will feel that they are always being observed by the teacher, and as the result, the learner or the student will follows and participate the lesson seriously. In the other word, the function of teacher in the process of teaching learning is a director, facilitator, moderator and motivator of learning. When the teacher provides a new lesson about reading text, the teacher must be able to make the student understand what the text mean. So the teacher used to motivate and involve students in the thinking, reading, and writing aspects.

2. Paradigm

Based on the theoretical framework above, describe the paradigm as follows:





Based on the figure above, it can be concluded that semantic mapping can be implemented in reading comprehension process. If the students reading score is good so semantic mapping can influences the students reading comprehension. If students reading score is poor so semantic mapping cannot influences the students reading comprehension.

3. Hypothesis Formulation

Kumarsingh states that a hypothesis is a tentative statement between two or more variable²⁹. And it can be understood that hypothesis as a statement about the condition of the parameter of the research with sample.

²⁹ Yogesh Kumarsingh, *Fundamental of Research Methodology and statistics*, New Delhi, New Age International (P) Limited, 2006, P. 55.

The researcher used in experiment in which the researcher compares the group. Base on the statement above, it can be understood that hypothesis may be precisely defined as a tentative proposition suggested as a solution to a problem or as an explanation of some phenomena's.

The formulation of the hypothesis as follows: "Any influence of using semantic mapping on the students reading comprehension at the eleventh graders of SMA Muhammadiyah 1 Purbolinggo".

CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

According to Kumarsingh, research design is a choice of an investigator about the components of his project and development of certain components of the design.³⁰ This research is an experiment research which would be conducted a

³⁰ Yogesh Kumarsingh, *Fundamental of Research Methodology and statistics*, New Delhi, New Age International (P) Limited, 2006, P. 86.

quantitative; it would be held in SMA Muhammadiyah 1 Purbolinggo. The researcher would investigate the eleventh graders in the academic year of 2011/2012.

B. Population and Sampling Technique

1. Population.

Population or universe means the entire mass of observation, which is the parent group from which a sample is to be formed.³¹ It means that the population was all subject that would be observed in this research.

The population of this research is the eleventh graders of SMA Muhammadiyah 1 Purbolinggo. The researcher would investigate the eleventh grader in the academic year of 2011/2012. The total population in this research was about 159 students, which are divided into five classes.

Bellow was the data of the population:

Table, 2

The quantity of eleventh graders of SMA Muhammadiyah
in the academic year of 2011/2012

N	Class	Gender	Data
----------	--------------	---------------	-------------

³¹.Ibid, P. 82.

o		Male	Female	
1	XI IPS 1	20	13	33
2	XI IPS 2	19	14	33
3	XI IPA 1	12	18	30
4	XI IPA 2	11	22	33
5	XI IPA 3	11	29	30
Total students		73	86	159

Source: Documentation of SMA Muhammadiyah 1 Purbolinggo

2. Sampling Technique.

In this research, the researcher will be used cluster sampling in take sample. Cluster sampling is sample units contain groups of elements (cluster) instead of individual members or items in the population.³²

The population of this research was the eleventh graders of SMA Muhammadiyah 1 Purbolinggo, in the academic year of 2011/2012. There were five classes that consist of 159 students.

In order that in deciding the experiment class, the researcher uses cluster sampling, and decide that class XI IPA 1 as an experiment class and class XI IPA 2 as a control class. Experiment class as the class that used semantic

³² Yogesh Kumar Singh, Op.Cit., p.86

mapping in teaching reading process, and control class as the class that not used the semantic mapping in teaching reading process, and all of this action was to know whether using semantic mapping has significant influences on the students' reading comprehension.

C. Operational Definition Of Variable

Operational definition is the definition which based on the characteristic of the things that would be defined, and it can be observed or measured³³. Based on the statement, the operational definition of variable in this research was:

1)Independent Variable

The independent variable in this research is semantic mapping which is defined as an understanding of the words meaning by making connections, by creating links, by exploring and testing links as a basic process of creative thinking. Thus, creating a semantic map is one way of representing and communicating one understands of concepts.

Furthermore, based on the theoretical review, the indicators of semantic mapping in teaching reading of the eleventh graders of SMA Muhammadiyah 1 Purbolinggo in the academic year of 2011/2012 are:

- 1) Clarity, Clarity refers the clarity of the content knowledge reflected in the semantic maps drawn by the students and teacher as well as clarity of structure of the maps for representing content knowledge.

³³ Edi Kusnadi, *Methodologi Penelitian*, Metro:STAIN, Metro, 2008, P. 29

- 2) Relevance, Relevance refers to the appropriateness of the content knowledge in the map as related to the subject areas.
- 3) Integration and organization, refers to the overall quality the map in reflecting the complexity of the relationship among the concept portrayed in the map.
- 4) Creativity refers to the extent which students and teacher has used creative ideas or structures to represent content.

Moreover based on the theoretical review, to measure the researcher gives semantic mapping as a treatment in teaching reading comprehension lesson.

2) Dependent Variable

Dependent Variable in this research is the reading comprehension which is defined as the process of reading activity to get clear information about the topic. To get it, the readers need comprehend text and the readers must recognize word, so they can understand text easily. It means that the students reading comprehension are the students understanding about the content of reading text that the teacher has given it to them. It can be known that, the indicators of reading comprehension in:

- 1) Getting ideas
- 2) Understanding meaning
- 3) Identifying new words

To measure reading comprehension text, the researcher gives a pretest and posttest to the students. Both pretest and post test give 20 items to the students as the test. The score of each question is 5 point for right answer, and 0 for false answer. So, the highest score is 100 and the lowest score is 0.

D. Data Collection Method

1. Test

Test is sequence of statements or questions using to measure skill, knowledge, intelligence, ability, or talent which have by individual or group.³⁴ The test will be arranged by using multiple choices. It consists of 20 items. The score of item is 2 for the true answer. This method is used to measure the use of semantic mapping technique on the reading comprehension by pre-test and post-test.

Pre-test and pot-test is to know students' reading comprehension. Pre-test was done to know students' reading comprehension before treatment and post-test was given to know students' reading comprehension after treatment. The test was given to the students at the eleventh graders. The test is a primary method in collecting the data.

2. Documentation

³⁴ Edi Kusnadi, *Op.Cit.*, p.90

The instrument would be used for documentation. It can be defined that documentation is as the method which is used to get information from written language/documentation (for example: book, magazine, note, ect).

The researcher uses the documentation method to get detail information about condition of the teacher, employers, and organization structure of SMA Muhammadiyah 1 purbolinggo in the academic year of 2010/2011.

3. Observation

Observation is the data collection method that has purpose of observation is to explain the situation that we examine, the activities that occur, the individuals involved in an activity and the relationship between situations, between activities and between individuals.

The researcher uses this method to get detail information and the process of the events whiles the research at SMA Muhammadiyah 1 purbolinggo in the academic year of 2011/2012.

E. Research Instrument

Suharsimi Arikunto defines instrument as the tool of research which is used in each method.³⁵ Furthermore, the researcher instrument involves:

1. Instrument Blue Print

³⁵ Suharsimi Arikunto, *Op. Cit.*, P.26

Instrument in this research is designed and adjusted with the indicators which have been specified. Moreover, research instrument which will be used in this research is the test form.

Furthermore, there are two tests in this research. The first is pre test and the second test is post test.

2. Instrument Calibration

Instrument is the scale of measurement which will be used to decide the instrument standard will be used. Furthermore, instrument calibration is screening or examination of items of instrument that made by the researcher.³⁶ From the quotation above, it can be inferred that the instrument calibration is the scale of measurement which will be used to screening or examination of items instrument that made by researcher. Furthermore, the researcher used to the standard for test instrument as following:

There are two steps of test. These are pre-test and post-test. The researcher used the objective test. It is multiple choices test which consists of four options for each answer (A, B, C, and D). Multiple choices test is used since its marking is rapid, simple and most important are reliable. The material will be tested is reading comprehension. The researcher used 20 items for pre-test and 20 for post-test. The score of each question is 5 point for right answer, and 0 for false answer. So, the highest score is 100 and the lowest score is 0.

³⁶ Team of STAIN, *Pedoman Penulisan Karya Ilmiah*, (Metro: STAIN Jurai Siwo Metro, 2010), p.33

a. Validity

Kusnadi said that “construct validity (logical validity) demonstrates that the arranged instrument is based on theoretical construction about the measured factors in the research variable.³⁷ It means that construct validity or logical validity is used to evaluate if the instrument have fulfill the theoretical of variables.

Testing of validity of the test instrument in this research use excel counting validity. Then, the researcher analyzed by using the formulation of Product Moment. The formula as follow:

$$r = \frac{(N \cdot \sum XY) - (\sum X)(\sum Y)}{\sqrt{\{(N \cdot \sum X^2) - (\sum X)^2\} \{(\sum Y^2) - (\sum Y)^2\}}}$$

b. Reliability

Kusnadi states that “reliability is the index which demonstrates that in what level instrument can be trusted or can be pledge.”³⁸ In order word, reliability directs to the level of reliability of thing. It means that, if the instrument is reliable, the result data will be trusted or reliable.

In this research, the researcher tried out the instruments first before used on real sample to keep its reliability. The items of the test were

³⁷ Edi Kusnadi, *Op.Cit.*, p. 107

³⁸ Edi Kusnadi, *Op.Cit.*, p. 128

$$r_{11} = \frac{k}{k-1} \left(1 - \frac{\sum \sigma_{b^2}}{\sigma_t^2} \right)$$

analyzed use Alfa Coefficient from Cronbach formulation. The formula as follow:

F. Data Analysis Technique

To investigate whether there is influence of the using semantic mapping technique on the students' reading comprehension at the eleventh class of SMA Muhammadiyah 1 Purbolinggo, the researcher analyzes the data using t-test.

The formulation of t-test:³⁹

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\left(\frac{S^2}{N_1}\right) + \left(\frac{S^2}{N_2}\right)}}$$

Where :

T : t-test.

\bar{X}_1 : Average score of the Experiment class.

\bar{X}_2 : Average score in the Control class.

S^2 : Variants of population

³⁹ Marzuki, et.al, *Statistik Terapan*, (Yogyakarta: Gadjah Mada University Press,2000), p.183

N_1 : Number of students in the experiment class.

N_2 : Number of students in the control class.

CHAPTER IV

RESULT OF THE RESEARCH

A. Data Description

Data description embraces profile and research variable data.

1. Research Setting of SMA Muhammadiyah 1 Purbolinggo

a. Location of SMA Muhammadiyah 1 Purbolinggo

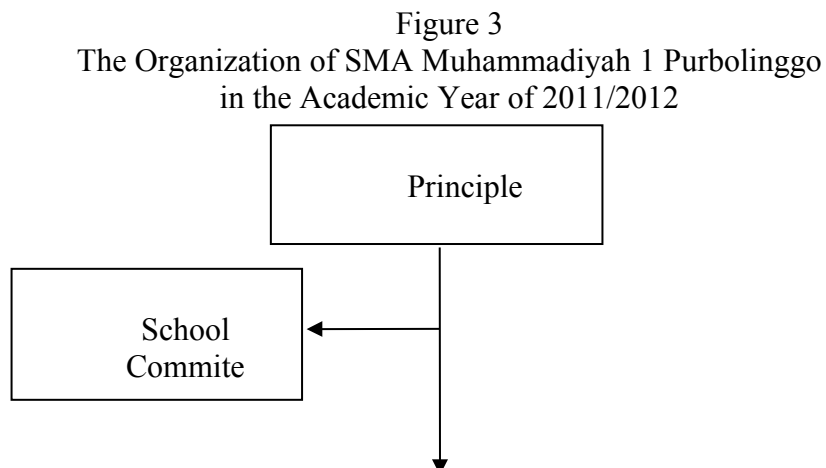
SMA Muhammadiyah 1 Purbolinggo is the old-owned senior high school in Purbolinggo which is located on Rawa Patah street, Toto Harjo, Purbolinggo district, east lampung. The total area of SMA Muhammadiyah 1 Purbolinggo is about 1,300 M₂.

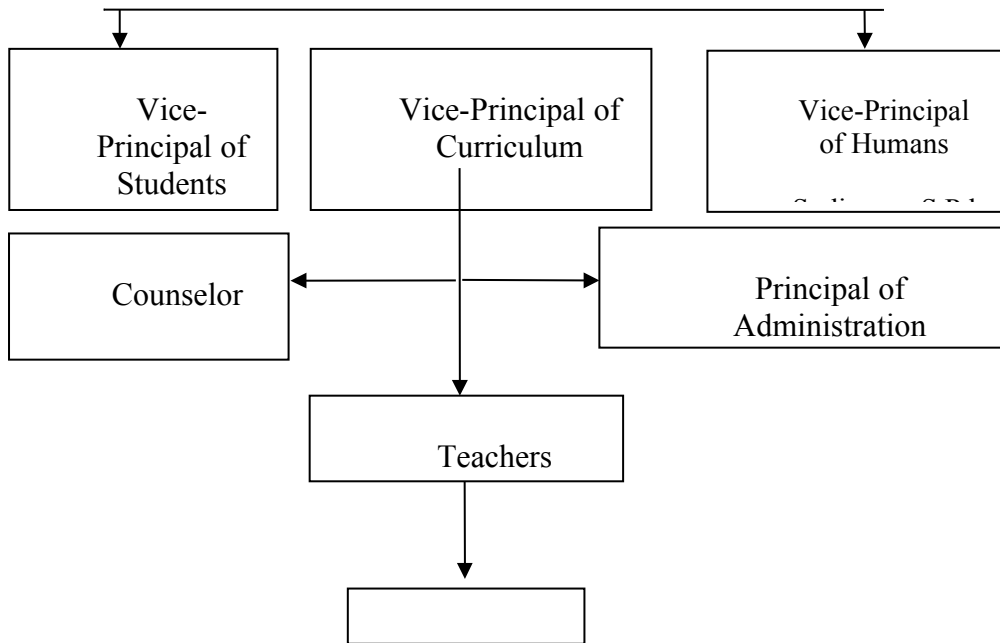
b. A Brief History about SMA Muhammadiyah 1 Purbolinggo

SMA Muhammadiyah 1 Purbolinggo was established on 1980. It was established because of the need of the society. When SMA Muhammadiyah 1 Purbolinggo was established, the government gave it SK no. 1189/I.12/B.I/U/1991. Moreover, SMA Muhammadiyah 1 Purbolinggo in the academic year of 1980-1996 was headed by Suparmin, BA, on 1996-2004 was headed by H. Supar Darwis, BA., and on 2004 until now has been headed by Sedono, S.Pd, M.Pd.

c. The Organization of SMA Muhammadiyah 1 Purbolinggo

The Organization of SMA Muhammadiyah 1 Purbolinggo in the Academic Year of 2011/2012 can be shown in the figure as follows:





d. Human Resource

In the human resource includes number of teachers, official employees, sex and the education.

SMA Muhammadiyah 1 Purbolinggo has 49 the human resource. 2 of teachers graduated from strata 2; 41 of teachers that graduated from strata one and 3 of official employees who graduated from senior high school, there is 3 who graduated from diploma. There are 24 females and 25 males.

e. Infrastructure

Every school needs infrastructure to support of teaching and learning. The infrastructure which is had by SMA Muhammadiyah 1 Purbolinggo can identified as follow:

Table 5
The Number of Infrsrttructure SMA Muhammadiyah 1 Purbolinggo
In the Academic Year 2011/2012

No.	Name of Building	Amount
1.	Parking area	1
2.	Classroom of XII	3
3.	Classroom of X	5
4.	Classroom of XI	5
5.	Computer Laboratory	1
6.	Teachers' room	1
7.	Headmasters' room	1
8.	Principal of administration's room	1
9.	Administrations' room	1
10.	Healthy room	1
11.	Counselings' room	1
12.	Library	1
13.	IPA laboratory	1
14.	Students' toilet	12
15.	Teachers' toilet	1
16.	Mosque	1

17.	Cantent	5
18.	Storerroom	-

Infrastructure of SMA Muhammadiyah 1 Purbolinggo can be support of process teaching and learning. Such as, the students can do chemistry practice in the laboratory room and they can do computer practice in the computer room. So that existence of infrastructure in SMA Muhammadiyah 1 Purbolinggo can increase quality of process teaching and learning. But not all of infrastructure in SMA Muhammadiyah 1 Purbolinggo is adequate. Such as, students' toilet is broken, library, parking area and practice room. It caused by amount of many students and limitedness of infrastructure.

2. Research Variable Data

There are two variables in this research. They are independent variable (X) and dependent variable (Y). The independent variable is using semantic mapping technique and dependent variable is reading comprehension.

a. Semantic Mapping

In this research, semantic mapping is one way to explain how to categorize word meanings. Semantic maps provide the additional benefit of helping students visualize how word meanings can be categorized. Mapping is also an effective technique for teaching

reading skill and textual patterns of organization, and it is effective for improving note taking and creative thinking skills. The semantic mapping technique as being used to motivate and involve students in the thinking, reading, and writing aspects. It enhances vocabulary development by helping student link new information with previous experience.

The researcher did not measure of their semantic mapping. Semantic mapping in this research just as a technique to reading comprehension.

b. Students' Reading Comprehension

Reading comprehension is process of understanding of writing or searching for meaning, using our knowledge of the word or of text to understand new thing we read. To teach reading, the teacher need a technique in order their students can comprehend more a text.

The researcher used objective test with multiple choices test to measure the students' reading comprehension which consist of 20 items, each items consist of four options (A, B, C, D, and E). The researcher gave 20 items to pre test and 20 items to post test with same difficulty. Post test was given by the reseacher after analyzing and discussing the weakness and strength that was done by the

teacher and the students during teaching-learning process without explaining and giving the reading comprehension exercise in pre-test.

1. Result of pre-test

The researcher has done pre-test to the control class. The result of pretest in the control class can be identified as follow:

Table 6
The result of Pretest at at the eleventh graders (control class)
in the academic year Of 2011/2012

N O	Control Class	
	Students' initial	Pretest score
1	ANP	55
2	ASP	75
3	AFT	75
4	ABY	70
5	ANH	75
6	AS	75
7	BM	40
8	CS	70
9	DA	60
10	DGC	55
11	DNK	55

12	DIAN	60
13	DIAR	45
14	DIAW	80
15	DIAP	55
16	EYS	60
17	EA	60
18	FS	75
19	HMH	30
20	IW	50
21	MCS	70
22	MSP	75
23	MU	75
24	MK	55
25	MFD	50
26	MFU	35
27	SS	70
28	SNR	65
29	SRM	75
30	YOU	50
31	YUA	60
32	YUW	75

33	ZER	50
The Result		2025
Average		61.3636

Based on the pre-test result (control class), the researcher measured the interval:

$R = \text{The highest score} - \text{lowest score}$

$$= 80 - 30$$

$$= 50$$

$K = 1 + 3.3 \log n$

$$= 1 + 3.3 \log 33$$

$$= 1 + 3.3 (1.52)$$

$$= 1 + 5.049$$

$$= 6.016 (6)$$

$$P = \frac{R}{K}$$

$$= \frac{50}{6}$$

$$6$$

$$= 8$$

After knowing the class interval, the data was put on the table of frequency distribution as follows:

Table 7
Frequency distribution of students' score in pre test
(Control class)

Class interval	Frequency	Percentage %
30-38	1	3%
39 – 46	2	6%
47 – 54	5	15%
55 – 62	10	30%
63 – 70	5	15%
71 – 78	9	27%
79 – 86	1	3%
Jumlah	33	100%

From the data shows that the most of students (24 students in control class) got score lower than 70. It means that 72.7 % has not reached minimum standard (KKM) at SMA Muhammadiyah Purbolinggo yet. The average score is 61.36. It means that the result of students' reading comprehension in pre-test was unsatisfactory.

The researcher has done pre-test to the experiment class too. The result of pretest in the experiment class can be identified as follows:

Table 8

The result of pretest at at the eleventh graders (experiment class)
in the academic year of 2011/2012

N O	Experiment Class	
	Students initial	Pretest Score
1	ANF	60
2	ADRS	65
3	ASN	65
4	A S W	50
5	B PW	55
6	E A	65
7	E R	65
8	E A	45
9	ESR	60
10	IPS	60
11	IC	50
12	JD	60
13	KWS	55
14	MAG	65
15	NTA	45
16	PK	65
17	PP	65

18	PWS	70
19	RCF	55
20	RW	55
21	SK	60
22	SR	60
23	SN	40
24	TS	70
25	TCS	70
26	VRW	50
27	VAN	50
28	WZA	55
29	WAW	75
30	MAS	60
The Result		1765
Average		58.8333

Based on the result of pre-test (experiment class), the researcher measured the interval:

$$\begin{aligned}
 R &= \text{The highest score} - \text{lowest score} \\
 &= 75 - 40 \\
 &= 35
 \end{aligned}$$

$$\begin{aligned}
K &= 1 + 3.3 \log n \\
&= 1 + 3.3 \log 30 \\
&= 1 + 3.3 (1.49) \\
&= 1 + 5.082 \\
&= 5.917 (6)
\end{aligned}$$

$$\begin{aligned}
P &= \frac{R}{K} \\
&= \frac{35}{6} \\
&= 5.8 (6)
\end{aligned}$$

After knowing the class interval, the data was put on the table of frequency distribution as follows:

Table 9
Frequency distribution of students' score in pre test
(Experiment class)

Class interval	Frequency	Percentage %
40 – 45	3	10%
46 – 51	4	13.3%
52 – 57	5	16.6%
58 – 63	7	23.3%
64 – 69	7	23.3%

70 – 75	4	13.3%
Jumlah	30	100%

From the table above shows that the most of students (experiment class) got score lower than 70. The criteria of students who are successful in mastering the material are the students who get minimum standard (KKM) that is 70. It means that 74.33% has not reached minimum standard (KKM) at SMA Muhammadiyah 1 Purbolinggo yet. The average score is 58,83. It means that the result of the students' reading comprehension was unsatisfactory.

2. Result of Post-test

The result of the students' posttest (control class) can be identified as follows:

Table 10
The result of Posttest at at the eleventh graders (control class)
Of SMA Muhammadiyah 1 purbolinggo

NO	Control Class	
	Subject	Posttest
1	ANP	60
2	ASP	70
3	AFT	50

4	ABY	75
5	ANH	70
6	AS	45
7	BM	50
8	CS	80
9	DA	50
10	DGC	75
11	DNK	70
12	DIAN	90
13	DIAR	85
14	DIAW	65
15	DIAP	75
16	EYS	75
17	EA	90
18	FS	75
19	HMH	55
20	IW	75
21	MCS	70
22	MSP	65
23	MU	70
24	MK	85

25	MFD	80
26	MFU	75
27	SS	60
28	SNR	65
29	SRM	75
30	YOU	65
31	YUA	70
32	YUW	75
33	ZER	70
The Result		2305
Average		69.8485

Based on the post-test result (control class), the researcher measured the interval:

$$\begin{aligned}
 R &= \text{The highest score} - \text{lowest score} \\
 &= 90 - 45 \\
 &= 45
 \end{aligned}$$

$$\begin{aligned}
 K &= 1 + 3.3 \log n \\
 &= 1 + 3.3 \log 33 \\
 &= 1 + 3.3 (1.52) \\
 &= 1 + 5.016
 \end{aligned}$$

$$= 6.016 (6)$$

$$P = \frac{R}{K}$$
$$= \frac{45}{6}$$
$$= 7.5 (8)$$

After knowing the class interval, the data was put on the table of frequency distribution as follows:

Table 11
Frequency distribution of students' score in post-test
(Control class)

Class interval	Frequency	Percentage %
45 – 53	4	12.1%
54 – 61	3	9.1%
62 – 69	4	12.1%
70 – 77	16	48.5%
78 – 85	4	12.1%
86 – 93	2	6.1%
Jumlah	33	100%

From the table above shows that 66.7% of the students (control class) have reached minimum standard (KKM) that is 70. The average score is 69,84.

The researcher also conducted posttest for the experiment class too. The result of the students' posttest (experiment class) can be identified as follows:

Table 12
The result of Posttest at at the eleventh graders (experiment class)
In the academic year of 2011/2012

NO	Experiment Class	
	Students Initial	Posttest
1	ANF	75
2	ADRS	80
3	ASN	75
4	A S W	75
5	B PW	80
6	E A	85
7	E R	75
8	E A	85
9	ESR	70
10	IPS	75
11	IC	75

12	JD	85
13	KWS	30
14	MAG	90
15	NTA	65
16	PK	80
17	PP	75
18	PWS	80
19	RCF	75
20	RW	75
21	SK	75
22	SR	80
23	SN	75
24	TS	75
25	TCS	75
26	VRW	75
27	VAN	90
28	WZA	85
29	WAW	90
30	MAS	85
The Result		2310
Average		77

Based on the post-test result (experiment class), the researcher measured the interval:

$$\begin{aligned} R &= \text{The highest score} - \text{lowest score} \\ &= 90 - 30 \\ &= 60 \end{aligned}$$

$$\begin{aligned} K &= 1 + 3.3 \log n \\ &= 1 + 3.3 \log 30 \\ &= 1 + 3.3 (1.47) \\ &= 1 + 4.851 \\ &= 5.851 \text{ (6)} \end{aligned}$$

$$\begin{aligned} P &= \frac{R}{K} \\ &= \frac{60}{6} \\ &= 10 \end{aligned}$$

After knowing the class interval, the data was put on the table of frequency distribution as follows:

Table 13
Frequency distribution of students' score in post test
(Experiment class)

Class interval	Frequency	Percentage %
30 – 39	1	3.3%
40 – 49	-	0%
50 – 59	-	0%
60 – 69	1	3.3%
70 – 79	15	50%
80 – 89	10	33.3%
90 – 99	3	10%
Total	30	100%

From the table above shows that 93.3% of the students (experiment class) have reached minimum standard (KKM) that is 70. The average score is 77. It means that the result of the students' reading comprehension was satisfactory. It means that semantic mapping technique can be a good reading technique in students' reading comprehension.

B. Hypothesis Testing

After applying the test method, the researcher analyzed the data by using t-test in order to prove whether there is significant influence of

semantic mapping technique on the students' reading comprehension at the eleventh grades of SMA Muhammadiyah 1 Purbolinggo.

1. Preparing the table in order to prove whether there is influence of using semantic mapping technique on the students' reading comprehension at the Eleventh graders of SMA Muhammadiyah 1 Purbolinggo in the academic year of 2011/2012.

Table 14

The posttest score of Experiment Class and Control Class

At the Eleventh Graders of SMA Muhammadiyah

In the Academic Year of 2011/2012

Experiment class				Control class			
Post-test Score (X)	Frequency (F)	F.X	FX ₁	Post-test Score (X)	Frequency (F)	F.X	F.X ₂
30	1	30	900	45	1	45	2025
65	1	65	4225	50	3	150	7500
70	1	70	4900	55	1	55	3025
75	14	1050	78750	60	2	120	7200
80	5	400	34000	65	4	260	16900

85	5	425	312 5	70	7	490	343 00
90	3	270	243 00	75	9	675	506 25
				80	2	160	128 00
				85	2	170	144 50
				90	2	180	162 00
	N 30	$\bar{X}\bar{X}_1$ 2310	181 200		N 33	$\bar{X}\bar{X}_2$ 2305	165 025

2. Putting the data above into formulation of t-test in order to get “t-observed”.

$$S^2 = \frac{\sum (X - \bar{X}_1)^2 + \sum (X - \bar{X}_2)^2}{N_1 + N_2 - 2}$$

$$S^2 = \frac{\left(181200 - \frac{2310^2}{30}\right) + \left(165025 - \frac{2305^2}{33}\right)}{30 + 33 - 2}$$

$$S^2 = \frac{(181200 - 177870) + (165025 - 16100)}{61}$$

$$S^2 = \frac{(3330) + (4025)}{61}$$

$$S^2 = 120.573$$

Therefore the researcher counted by using the formula of T-test as follows:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\left(\frac{S^2}{N_1}\right)\left(\frac{S^2}{N_2}\right)}}$$

$$t = \frac{69.848 - 77}{\sqrt{\left(\frac{120.573}{30}\right)\left(\frac{120.573}{33}\right)}}$$

$$t = \frac{-7.162}{\sqrt{7.6728}} = \frac{-7.162}{2.7699}$$

$$t = -2.582$$

After analyzing by using SPSS 16, the researcher got the data out put as follows:

Table 15

The result of data out put from SPSS

Group Statistics

		N	Mean	Std. Deviation	Std. Error Mean
reading comprehension	semantic mapping control	33	69.8485	11.21417	1.95214
	semantic mapping experiment	30	77.0000	10.71576	1.95642

The table above demonstrated that mean of control class result was 69.8485, its standard deviation was 11.21417 with total sample of 33 and its standard error mean was 1.95214. Meanwhile, the mean of experiment class result was 77.0000, its standard deviation was 10.71576 with total sample of 30 and its standard error mean was 1.95642.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference		
								Lower	Upper	
reading comprehension	Equal variances assumed	1.14	.295	-2.582	61	.012	-.71	12.698	-1.612	1.185
	Equal			-	6					

The table above illustrated that $F = 1.114$, significance = 295. So that, probability $295 > 0,05$. It shows that two variants are same. So, t-test is being appropriate using Equal variances assumed. The value of t on the Equal variances assumed is 2.582, significance = 0.12. So that probability $0.12 > 0.05$. Meanwhile, t-table (0,05, df 61) = 1.990, (0,12, df 61) = 2.638. So, t-observed is $2.582 > t\text{-table } 0,05 = 1.990$. It means that the mean of control class (69.8485) is different with the mean of experiment class (77.0000). Thus, the experiment class is being better than control class.

C. Interpretation

1. Interpretation of “t-observed”

After applying the treatment the researcher found t-observed (2.582), and the stipulation of hypothesis testing is that, if the t-observed higher than

t-table, H_a is accepted and H_o is rejected and on the other way t-observed smaller than t-table, H_a is rejected and H_o is accepted.

If $t\text{-observed} > t\text{-table}$, H_a is accepted and H_o is rejected.

If $t\text{-observed} < t\text{-table}$, H_a is rejected and H_o is accepted.

To know whether hypothesis is accepted or rejected. The researcher firstly counted degree of freedom. To know the critical value of t-test (t-observed), the researcher firstly counted df. df is Degree of Freedom. The formulation of $df = N_x + N_y - 2$

$$\begin{aligned} df &= N_x + N_y - 2 \\ &= 30 + 33 - 2 \\ &= 61 \end{aligned}$$

After considering the t-test table by using df 61, the researcher not found it in t-table. So, it is done interpolation because 61 are higher than 60 and smaller than 120.

Table 16

Critical Value of t-table			
	5%	1%	0.1%
d.f	2.000	2.660	3.460

60			
d.f 120	1.980	2.617	3.373

	5%	1%	0.1%
<u>d.f 60 + d.f 120</u>	<u>2.000 + 1.980</u>	<u>2.660 + 2.617</u>	<u>3.460 + 3.373</u>
2	2	2	2
	= 1.990	= 2.638	= 3.416

From all data analysis above, it can be known that:

$$t\text{-observed} = 2.582$$

$$t\text{-table} = 1.990 (5\%), 2.638 (1\%) \text{ and } 3.416 (0.1\%)$$

The data confirm that t-observed is higher than t-table. Therefore, it can be inferred that H_a is accepted and H_o is rejected. It means that there is significant influence of Semantic Mapping Technique on the students' reading comprehension at the eleven grades of SMA Muhammadiyah 1 Purbolinggo in the academic year of 2011/2012.

D. Discussion

The findings of the study indicate that there are statistically significant differences between the experimental group and the control group. The

mean scores of the students in the experimental group on the reading comprehension achievement post-test is 77. It is considered higher than the mean scores achieved by the students in the control group which is only 69.84. The t-value calculated on the t-test is 2.582 showing a significant difference at ($\alpha=.05$) as illustrated in table 16. Consequently, the null hypothesis "That there is no statistically significant differences at ($\alpha=.05$) between the experimental and the control group which can be attributed to the semantic mapping strategies" is rejected while the alternative one " that there is statistically significant differences at ($\alpha=.05$) between the experimental and the control group which can be attributed to the semantic mapping strategies" is accepted. The researcher observes how enthusiastic students were with this way of teaching reading. They were very active to the extent that they started giving their suggestions to develop the map. One of their suggestions is to include the good things and the bad things of the characters and how they should behave in the text. Their suggestions were unexpected and great. Students become familiar with the nature of the semantic maps, they can create their own as a during-reading or post-reading activity.

E. Limitation

However after conducting the research and gaining the data from test, the researcher found it some problems faced by students, as follows:

1. Problem in reading comprehension

- a. Reading needs time and this time is necessary for students to grow, develop and improve their reading comprehension. Improvement entails practice. Time allocated for any reading task should be limited and agreed on for students to know how to read in an effective way using the semantic mapping strategy to plan to their reading.

- b. Students need an environment that promotes reading and provides opportunities for individuals to work together in creating such maps.

- c. Students need modeling for teaching reading by using the semantic strategy; therefore, teachers should familiarize students with the semantic mapping strategy by providing them with some models of maps.

2. This research only conducting on the eleventh graders, so the result is limited only to this.

-
-
3. This research was held on the academic year of 2011/2012, so the result of this research is only for those years.

CHAPTER V

CONCLUSION AND SUGGESTION

A. CONCLUSION

Based on the analysis and the result of this research, the researcher concluded that semantic mapping technique is the good technique in teaching reading process at the eleventh graders of SMA Muhammadiyah 1 Purbolinggo, because it can influence the students reading comprehension.

The semantic mapping as a technique in reading comprehension can influence the students reading comprehension. This case can be seen from the result of pre-test and post-test. In the pre-test, average score of experiment class was 58,83. And the average score of post test was 77. Meanwhile, the control class got average in pre-test was 61.36, while in post-test was 69,84. Most of students in control class (66.7%) and in experiment class (93.3%) students who have reached minimum standard. It means that the result of experiment class was higher than control class.

Semantic mapping technique can be as alternative choice in learning reading comprehension, It can be seen from the critical value “t-observed” was 2.582, so that it was higher than t-table (0,05, df 61) = 1.990, (0,01, df 61) = 2.638. Therefore, it can be inferred that the Hypothesis alternative (Ha)

of this research is accepted. It means that there is influence of using semantic mapping technique on the students' reading comprehension at the eleventh graders of SMA Muhammadiyah 1 Purbolinggo.

B. SUGGESTION

Considering the discussion of the research which was conducted at the eleventh grade students of SMA Muhammadiyah 1 Purbolinggo in the academic year of 2011/2012, the researcher proposes suggestion as follow:

1. For the teachers:

The teacher should give some guidelines to help students in the reading process. And also the teacher should choose the suitable technique in teaching English especially in reading class in order that the student can understand the material delivered by the teacher, because by an effective technique in teaching learning, it can automatically improved the student motivation in learning process and it can make them try the best effort to accepting the material taught by the teacher.

2. For the students:

a. The students should be more active in learning English, if they do not understand about their lesson delivered by their teacher, they should ask to the teacher.

- b. The students should choose the best strategy and technique in reading that enable they can comprehend text more easily.
 - c. The students should be able to concentrate more to comprehend text.
 - d. Encouraging students to read stories and make maps following the general semantic map.
 - e. Encouraging students to gather ideas and develop them in a well organized concept maps.
3. For the school
- a. The researcher greatly expects that this research can give contribution for the school, such as a reference for further studies in learning reading comprehension.
 - b. The school is recommended to make further studied in applying semantic mapping in learning reading comprehension text, so the students can concentrate more when reading because the classroom is quite situation.

BIBLIOGRAPHY

Antonacci, Patricia, A. and Catherine M. O'Callaghan, *40 Strategies for Middle and Secondary Classrooms*, United States: Developing Content Area Literacy. 2011

Balajthy, Ernest, *Struggling readers: assessment and instruction in grades k-6*, The Guilford Press. 2003

Brown, H. Douglas, *Teaching By Principle*, San Francisco: San Francisco state university, 2001

Buis, Killie, *Making words stick: strategies that build vocabulary and reading comprehension in the elementary grades*, Canada: Library and Archives, 2004

Cooper, J. David and Nancy D. Kiger, *Literacy: Helping Students Construct Meaning*, 7ed. Houghton Million Company. 2009

Edi Kusnadi, *Methodology Penelitian*, Metro: STAIN jurai siwo metro, 2008

....., *Pedoman Penulisan Karya Ilmiah (edisi revisi)*, STAIN Jurai Siwo Metro, 2010.

Farrell, Thomas, S.C *Planning Lessons for a Reading Class*, Singapore: SEAMEO Regional Language Centre, 2002

Gillet, Jean Wallace and Temple, Charles, *understanding reading problems*, 4ed. HarperCollinsCollegePublisher. 1994

Harris, J Albert and Edward R. Sipay, *How To Increase Reading Ability*, New York & London: Longman, 1984

Hasan Alwi and Sugono, *Telaah Bahasa dan Sastra*, Pusat Bahasa. 2002

[Http://www.Literacy.Uconn.Edu/Compre.Htm#Vocab](http://www.Literacy.Uconn.Edu/Compre.Htm#Vocab)

[Http://Www.Webserver.Ignov.Ac.In/Institute/Stride_Hb8_Webcd/Chapter22.Pdf](http://Www.Webserver.Ignov.Ac.In/Institute/Stride_Hb8_Webcd/Chapter22.Pdf)

Krull, Edgar, *Theory and practice in today's teacher education*, Trames; Journal of the Humanities and Social Sciences, Vol 9, No 2, 2005

Kumarsingh, Yogesh, *Fundamental of Research Methodology and statistics*, New Delhi, New Age International (P) Limited, 2006.

Palmer, E.R *Semantic second edition*, Cambridge university pers. 1981

Richardson, S. Judy, Raymond F. Morgan, and Charlene E. Fleener, *Reading to learn in the content areas*, 8 ed. Wadsworth. 2009

Siahaan, Sanggam, *Issues in Linguistics*, Graha Ilmu , Yogyakarta, 2008

Suharsini Arikunto, *Prosedur Penelitian Suatu Pendekatan Praktik*, Jakarta: PT.Rineka Cipta, 2006

CURRICULUM VITAE



The researcher, Deni Angga Saputra was born in Tanjung Intan, Purbolinggo, on Desember 15, 1988. He is the second child out of fourth children of Muhammad Karim and Neni Nurmala.

He joined school at kindergarten Aisiyah Purbolinggo in 1993-1995. At the same year, he entered at Elementary Shool at SDN 3 Tanjung Inten, Purbolinggo. Indeed, six years had been a long journey to pass in SDN 3 Tanjung Inten, Purbolinggo 1995-2001. Three years later he graduated from Muhammadiyah Junior High School (SMP Muhammadiyah 1) Purbolinggo east Lampung in 2001-2004. Then, he continued to State Senior High School (SMAN 1) Purbolinggo East Lampung and graduated in 2007. In 2007, he continued his study in English Department Program Strata 1 (S1 PBI) of STAIN Jurai Siwo Metro until now.