THE USE OF MULTIPLE-CHOICE COMPLETION TO
MEASURE STUDENTS’ VOCABULARY MASTERY

(The Case of the Second Year Students of SMA 2 Pekalongan in the Academic Year of 2006/2007)

A Final Project

Submitted in Partial Fulfillment of the Requirements for the Degree of Sarjana Pendidikan in English

by

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Dani Zenaal Arifin
ABSTRACT

The objective of the final project entitled “The Use of Multiple-Choice Completion to Measure Students’ Vocabulary Mastery of second year students of SMA 2 Pekalongan in the academic year of 2006/2007” is to know how far the students have mastered their new stock of words in vocabulary and whether or not their vocabulary knowledge fulfils the requirements on Bakat Umum (BAKUM) Standard and Basic Course Outlines’ criteria.

The population of this study was the second year students of SMA 2 Pekalongan in the academic year of 2006/2007. The members of the population were around 250 students. Out of the population, 36 respondents were selected as samples. To get these samples, a proportional cluster random sampling was applied. To gain the data, a test—multiple-choice completion was provided to the samples. However, before the test was applied, it had been tried out to the second year students of SMA 4 Pekalongan. The aim was to measure the Level of Difficulty (LD) and Discriminating Power (DP). Then, I examined the try-out test to the samples in order to get the reliability and validity.

The analysis of the test result indicates the following findings. According to criteria of success stated in GBPP, the respondents have had enough vocabulary but they must improve it. The finding of the results gets the scores, which are constructed in the table form. Then, the scores of the respondents are summed and divided by the whole numbers of the students in order to get the mean. Talking about the average, the mean obtained by the respondents in the test is about 69. Based on the criterion proposed by “Standar BAKUM”, the score is regarded average achievement because it lies between 60 and 69. It means that the majority of the second year students of SMA 2 Pekalongan have enough vocabulary knowledge. This is because it is neither too high nor too low.

Therefore, I would like to suggest to the teachers of English in the school get informed with the result of this study and take some necessary steps to overcome the situation.
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CHAPTER I
INTRODUCTION

1.1 General Background of the Study

Language has the closest correlation with human’s life, especially in communication. Of course, people need to cooperate with others because it has been the characteristics of human as social being (Ramelan, 1992:3). For that reason, people need something as a means of communication, that is, a language. Here are some definitions of language according to some experts; language is defined as a system of communication by which some messages can be conveyed (Ramelan, 1991:4), whereas, Harmer (2000:4) says that language is an intensely political issue since it is bound up with identity and power. Another definition is cited by Carol as quoted by Ramelan that language is an arbitrary system of speech sounds or sequences of speech sounds, which are used in interpersonal communication by an aggregation of human beings and which are rather exhaustively processes and events in the human environment. Ramelan (1992:1) also provides another explanation regarding to the importance of language, as follows:

“Remembering of how it is important for human beings to study language, recently, it has been approved that it should be there is a language that is universal so it can be used everywhere. For that reason, English has been the most appropriate choice among the other languages as an international means of communication. Therefore, not only English men that are able to use the language but also people from different countries. Many people from several countries study about English since it is reasonable that if someone wants to communicate with foreigner, of course, he has to be able to speak English, for example, when you meet a stranger in somewhere or when you go abroad.”
In Indonesia, the government has chosen English as the first foreign language that is taught at school. Furthermore, English has become the compulsory subject that must be learned by students of Elementary school to College Students. There are four basic skills that have to be mastered by English learners, among others are: reading, speaking, writing and listening. Besides all those skills, Basic Course Outline (GBPP), which is relevant to Competence Based Curriculum, has also an emphasis on some language components, among others are: grammar, vocabulary and spelling. However, I would like to discuss one of the components; that is, vocabulary.

The basic argument why I am interested in this component is that students have some difficulties in learning English vocabulary. As you could see that there are lots of ranges in English vocabulary items that will make some difficulties for the students to master. The other reason is that there is a lack of attention from teachers of English in teaching vocabulary. On the one hand, most of teachers of English only pay attention on teaching grammar rather than on teaching vocabulary. On the other hand, the most significant problem that their students face in mastering English is due to their lack of vocabulary knowledge. As a result, when a teacher asks a question to his students about “why can’t you finish your work well?” the students probably will answer “the examination is too difficult, Sir.” Then, when the teacher goes ahead on the next question, such as “why is it too hard for you?” they might reply, “I cannot understand this word or this sentence, Sir.” Let’s take an example of how it is difficult to study vocabulary; the word “iron” probably will make some confusion for the non-native English learners. This is actually because this word has
several meanings depending on the context of the sentences. It could be a noun or a verb. For examples, a sentence “where is the iron?” means that the word iron here has a function as an object, which is used to press out the wrinkles in clothing. Meanwhile, the sentence “I must iron all of my clothes after getting wet on the rain” has another function; that is, as a verb. This is since the word iron here is not an object but an action of pressing out something. Redman (1997:27) provides a notion regarding with vocabulary, as follows:

“If you want to use a word naturally, you need to learn the other words that often go with it (collocation) and this could be different from language to language. For example, you could probably say in English like this: “I missed the bus”, it means that I didn’t lose the bus but I didn’t catch the bus. Therefore, the use of a certain sentence, perhaps, has a specified meaning.”

Tarigan (1987:7) also provides an explanation regarding to vocabulary mastery that the quality of one’s language skill depends on the quality and the quantity of the vocabulary itself. In brief, I could point out that the more he masters the vocabulary, the better he uses his language skill. Actually, every skill or language component has a certain instrument as a device on its measurement. This also occurs in measuring one’s vocabulary mastery. Consequently, I have to use the most appropriate instrument in reaching that goal. However, among the four instruments, such as multiple-choice limited response, multiple-choice completion, multiple-choice paraphrase and simple completion (words), I am only interested in multiple-choice completion. The reason is because I think it is the most appropriate test in measuring student’s vocabulary mastery and it is easy and also valid in scoring. This means that the test could be considered as a good test if it measures what it is
supposed to be measured and when it is tested to the same respondents in the same time and place, it will meet the constant result.

1.2 Reasons for Choosing the Topic

The title of the study is “The Use of Multiple-Choice Completion to Measure Students’ Vocabulary Mastery.” The reasons why I choose the topic are based on some considerations, as follows:

Firstly, vocabulary, which is one of language components in English, plays an important role in students’ English learning itself. This is since it covers all aspects including the four skills (writing, reading, speaking and listening) related to the process of teaching and learning in the classroom. Nevertheless, it usually gets less attention from teachers of English because they think that vocabulary could be learned through experience.

Secondly, when learning vocabulary, the learners will get some difficulties, especially in remembering all vocabulary items that they have obtained at school because the safe capacity on their brain is not like a Processor Pentium that is able to save many files or data for a longer time. Therefore, I could also say that vocabulary learning takes a lot of time. Even though it needs a lot of time to study vocabulary, it still could be reached by providing some exercises to the learners and asking them to use every new vocabulary item that they have got in their daily activities like writing a letter or reading some sophisticated materials (novel, short story and newspaper). The reason why they have to use it repeatedly is because when they forget about the
At last, it is probably hard for me to measure one’s knowledge in vocabulary in order to gain the objective result without using the appropriate instrument. Based on the reason, I try to make use of multiple-choice completion by focusing on some considerations, as follows:

1) It is economical in time
2) It is easy in scoring
3) It is very statistical in collecting the data
4) It is valid in computation
5) It is very useful to measure one’s knowledge in vocabulary

1.3 Statement of the Problem
The problem is that whether the student’s vocabulary mastery has matched with their level as senior high school students or not can be stated, as follows:
How far do the second year students of SMA 2 Pekalongan in the academic year of 2006/2007 master their vocabulary?

1.4 Objective of the Study
The purpose of the study is as follows:
To measure the students’ vocabulary mastery in SMA 2 Pekalongan by using multiple-choice completion
1.5 Significance of the Study

1) For the teachers

The teachers can find out whether or not the students’ mastery of vocabulary have matched with their level as senior high school students.

2) For the students

When the students perceive that their vocabulary is still fair, they should practice more and more to support their English skills.

1.6 The Organization of the Study

The first chapter, the introduction, introduces some elements, such as the background of the study, reasons for choosing the topic, the purposes of the study, the significance of the study and the organization of the study.

The second chapter presents the theory underlying the final project writing that is regarding with vocabulary, curriculum and multiple-choice completion.

The third chapter, which comprises of research methodology in accordance with subject of the study, population of the study, sample and sampling technique of the study, research variables, type of data collection, the instrument of the study, the try out of the study, the technique of data analysis, criteria of success and administration of the test is clearly described.

The fourth chapter that contains the data analysis is designed in order to explain the final result of the study.

The last chapter, that is chapter five, comprises of conclusion and suggestion.
CHAPTER II
REVIEW OF RELATED LITERATURE

2.1 Definition of Vocabulary

Language has vocabulary. It consists of a great number of words, each of which is dependently meaningful. Here are some definitions about what vocabulary is. Hornby (1963:959) defines vocabulary as the range of words known to, or used by, a person in a trade, profession, etc, whereas, Burton (1982:99) defines vocabulary as the range of language of a particular person, class, and profession.

From the explanation above, I withdraw a conclusion that vocabulary is a list of words with their meanings, which is employed in a language by group or individual.

2.2 The Mastery of Vocabulary

Valetta as cited by Kustaryo (1988:3) says that the ability to understand the target language greatly depends on one’s knowledge of vocabulary. The words one knows depend on the experience one has got. A child’s experience is very limited in his range and therefore his vocabulary is limited, too. The students usually have a certain motivation to master certain vocabulary, usually in relation to their need. For instance, when a student wants to go abroad, he needs to know the expression for asking someone else’s information, booking a room in a hotel, buying some items in a department store, ordering meals in a restaurant and so on. Faerch as cited by Palmberg (1986:18) says that:
“Actually, there are two kinds of vocabulary mastery, such as the receptive or passive vocabulary mastery and productive or active vocabulary mastery. The receptive vocabulary mastery is the vocabulary in which one knows its meaning and usage in a certain context, while the productive vocabulary is the vocabulary that he knows and uses actively to express his ideas, opinions, and feelings in communication. Sometimes, one uses his receptive vocabulary in communication so I can say that there is a continuum between the ability to know the sense of words and to activate them for productive purposes.”

However, when the volume of English words is huge, it is very rare to find people even highly educated ones who know the total number of words. Outstanding linguists may have vocabulary of 30,000 to 40,000 words. An average educated person may have 15,000 to 20,000 words in his vocabulary (William, 1970:47). Besides that, people still have a job to steadily build up their stock of words, especially those who are still learning English.

It may make the curiosity for the learners to know the requirements of vocabulary mastery. Wallace (1982:27) says that to master or fully know about a foreign English word, the learners are expected to be able to:

1) recognize it in its spoken and written forms
2) recall it at will
3) relate it to appropriate objects or concepts
4) use it in appropriate grammatical forms
5) pronounce it in recognizable way
6) know it in what ways it can combine with other words
7) know the relation between the word to another word
8) to be aware of its connotation and denotation
9) to use it in appropriate level of formality in the appropriate situation
Kustaryo (1988:24) says that to enrich the vocabulary, people must expand or enlarge their range of words. The larger they have the range; the better their performance will be in all aspects of English. Vocabulary proficiency not only affects the students’ reading skills, but also their speaking, listening and writing. In composition, large vocabulary is very helpful in expressing ideas precisely, vividly and without repetition. Comprehension will be done well with large vocabulary for the passages and questions because it involves a range of words wider than that of daily conversation.

Finally, I’d like to conclude that vocabulary mastery is necessary for the English learners. This is since people cannot communicate their ideas as clearly as they would like to and they cannot grasp the ideas transmitted to them when their vocabulary is still minimum. This will also influence their ability in writing, listening, reading and speaking.

2.3 The Teaching of Vocabulary
Vocabulary teaching also invites notable reaction. Some people believe that the teaching of vocabulary is a waste of time since it is an unlimited number. They think that grammar and pronunciation are the right things to be taught in teaching a foreign language and vocabulary can be gained in communication.

Specialists in methodology fear that students will make a lot of mistakes in sentence construction if too many words are learned before the basic grammar has been mastered. Consequently, the teachers are led to believe that it is better not to teach vocabulary much. Besides that, they think that word meanings can be learned
through experience so that the words don’t need to be adequately taught in the classroom. It is true that vocabulary can be gained through experience, and even without attending vocabulary classes; the students are able to master a number of words. This is because they become familiar with the situation where the words frequently occur. In addition to those several specialists in methodology at that time, it seemed to believe that the meanings of words could not be adequately taught so it was better not to teach them (Allen, 1983:12).

Actually, the mastery of vocabulary itself includes how to pronounce and how to spell it, and then it will very much help the students to learn the other components of language, such as structure, fluency and vocabulary itself. Vocabulary selection must be adjusted to the goal of teaching and learning of a foreign language; for instance, the function words necessary for the structural patterns should be selected in relation to the teaching of those patterns. On the other occasion, when the students want to learn communication in English, the teacher can use the textbook with a communicative approach in teaching his students to practice guided conversation. The words are selected for dialogues and other communicative purposes. Therefore, the teachers who teach vocabulary must be able to make their teaching successful. For that reason, Wallace (1982:27) explains the following principles in teaching vocabulary:

1) Aims
   In teaching learning process, the teacher has to clear about his aims. He has to decide on what is involved in vocabulary learning. He also has to decide the words that should be mastered by his students.

2) Quantity
   The teacher has to decide on the quantity of vocabulary to be learned. The decision of the number of words in a lesson is very important. The actual number still depends on a number of factors varying from class to class and
the learners. If there are too many new words the learners may become confused, discouraged and frustrated.

3) Need
In teaching vocabulary, the teacher has to choose the words really needed by his students in communication. The students should be put in a situation where they have to communicate and get words they need.

4) Frequent exposure and repetition
It means that the teacher should give so much practice and repetition that his students can master the target words well. He also should give an opportunity to the students to use the words in writing or speaking.

5) Meaningful presentation
In teaching vocabulary, the teacher should present the target words in such a way that their meanings are perfectly clear and unambiguous. Therefore, the new words should be presented in contexts not in isolation

6) Situation for presentation
The teacher should tell the students that they have to use the words appropriately. The use of words depends on the situation in which they are speaking and depends on the person to whom they are speaking. Those principles of teaching vocabulary are to reach the target language.

However, the teacher should consider vocabulary selection based on these following considerations as pointed out by Wallace:

(1) Commonest words
The commonest words are the words that are commonly used or words that the students need. It means that vocabulary is chosen on the basis of its frequency first before mastering the vocabulary of low frequency.

(2) Student’s need
The words that are needed by the students are usually worth teaching. It means that an English teacher should give more emphasis on vocabulary that is very useful for the students both in writing and speaking. In other words, they have to master vocabulary that is really needed in communication.

Finally, I may conclude from the previous information about the teaching of vocabulary that the teachers may teach vocabulary to their students in the classroom though it can be gained through experience. Teachers who teach vocabulary have to understand the aim of teaching vocabulary. When teachers present a new vocabulary, they should consider some factors, as follows:
1) They primarily try to enable the students to recognize the words and their meanings perfectly.

2) They should teach their students about how to use some certain words on the appropriate context.

3) They should give more emphasis that vocabulary is very useful for them in learning English.

2.4 Vocabulary Size

In the following part, I would like to present some information dealing with the number of vocabulary items. In regard to this statement, there will be some issues that I would like to discuss.

2.4.1 Vocabulary size needed by a Second Language Learner

Nation and Waring (1977) state that the learners clearly need to know the 3,000 or so high frequently words of the language. These words should be provided priority before focusing on the other vocabulary until these words are well learned. They also say that after these high frequency words are learned, the next focus for the teacher is on helping the learners to learn the low frequency words. The kinds of strategies can be conducted are: (1) guessing from the context, (2) using word parts and technique to remember foreign language—first language word pairs. While, a way to manage the learning of vocabulary is through indirect and incidental learning, such as extensive reading, problem-solving group work activities and formal classroom activities.
There are many lists of high frequency words in English, for instance, The General Service List (GSL) that contains 2,000 words and The Teacher’s Word Book that consists of 30,000 words. In accordance with GSL, Nation and Waring comment that:

The 2,000 words GSL is a practical use to teachers and curriculum planner as it contains words within the word family, each with its own frequency. For examples, excited, excites, exciting and excitement come under the headword *excite*. The GSL was written so that it could be used as sources for compiling simplified reading texts onto stages and steps.

Furthermore, they add that vocabulary frequency lists play an important role in curriculum design and in setting learning goals. It doesn’t mean that a course design should have lists as the reference when they consider the vocabulary component of a language course and teachers need to have reference lists to judge whether a particular word deserves attention or not, and whether or not a text is suitable with a class.

2.4.2 Vocabulary size needed by Indonesian Learners

It is clearly stated in Curriculum and Basic Course Outline that the objective of teaching English at SMA is that the students have interest and ability of using English, especially for reading. Besides, they are also expected to be able to listen, speak and write simple compositions by using more advanced structure and vocabulary of 2,000 items (Department of Education and Culture, 1994:3). The vocabulary items are learned for six years and its classification is listed in the table below.
Table 1: The List of Vocabulary Items

<table>
<thead>
<tr>
<th>No</th>
<th>School</th>
<th>Class</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SMP</td>
<td>I</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>II</td>
<td>250</td>
</tr>
<tr>
<td></td>
<td></td>
<td>III</td>
<td>250</td>
</tr>
<tr>
<td>2</td>
<td>SMA</td>
<td>I</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>II</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>III</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2500 (tutored learning)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>2500</td>
</tr>
</tbody>
</table>

(Debdikbud, 1994:4)

Hopefully, after graduating from Senior High School, the students are expected to be able to use English in listening, speaking, reading and writing with vocabulary size around 2,500 items.

2.4.3 Studies on Vocabulary size of Indonesian Learners

There are many studies carried out by some linguists on vocabulary size of Indonesian Learners. Kwelju has made one study. In her study, it was found out:

“We can say generally that vocabulary mastery of Indonesian Learners is very limited. Even S1 students from 15 countries in all over Indonesia, approximately only have vocabulary size of 15% of S1 of native English student. In addition to S2 students of Indonesia from English department or non-English department, the same case also occurs.”

Hazzenberg and Hulstij as cited by Kwelju (2002:20) points out that this condition is not favorable for reading. Readers need more or less 5,000 word families
of high frequency words in order to be able to read easily, and for reading a novel at least one needs 7,000 word families. Moreover, many researchers see that realistically one needs to have a minimum 10,000 words to be able to read many kinds of books at university. Furthermore, the students’ knowledge of collocation are very limited too. Kwelju (2002:24) figures out that two classes of fifth semester students in English department only get 16% of the real collocation, for examples, 75% of 60 students do not know that “diary” must collocates with “to keep” become “keep a diary” but they produce “write a diary” and when the students are expected to produce rich food and fatty food, 50% of them produce heavy food, strong food and fat food. Another example is that it is certainly true that one connotation of moderate is conservative. However, when the students are expected to produce heavy drinkers as the connotation of moderate drinkers, what they produce is conservative drinkers, radical drinkers, maniac drinkers, old drinkers, conventional drinkers, etc. Only six of 60 students produce heavy drinkers.

By referring to the data picturing the vocabulary size of S1 and S2 of Indonesian students, I can identify that the students’ lack of vocabulary are very serious. I can also assume that the vocabulary size of SMA students in Indonesia is below 2,500 words.

Finally, I can point out that the vocabulary mastery of students in Indonesia should be improved as much as possible so the main aim of English teaching-learning process in Indonesia could be reached.
2.5 Multiple-Choice Completion

In this part, I’d like to talk about multiple-choice completion, which covers three main points. Those are: definition of multiple-choice completion, context preparation and advantages and also limitations of multiple-choice completion, whereas, the more details about them will be discussed, as follows:

2.5.1 Definition of Multiple-Choice Completion

Madsen (1983:12) defines multiple-choice completion as a test in which a sentence with a missing word is presented and provides an opportunity for students to choose one of four vocabulary items given to complete the sentence, whereas, Hornby (1987:556) explains that multiple-choice is an examination question showing several possible answers from which the correct one must be chosen and then he describes the meaning of completion itself as an act of completing a certain blank sentence.

From the explanations above, I’d like to draw a conclusion that multiple-choice completion is a type of vocabulary tests, which is constructed by deleting a word from a sentence in order to give a clue for the learners while choosing one of four options matched with the context of the sentence.

2.5.2 Context Preparation

He also provides some suggestions in order to write a good multiple-choice completion item, as follows:

1) Make a good selection to the words to be selected. This means that the words being selected must be matched with the English vocabulary items mostly used
in English class. This is because the learners are usually familiar with the items and suitable with their level.

2) Try to present the right kind of sentence to put each word in the sentence context (stem). This means that there is only one correct answer among three other options.

3) Choose several wrong words to put the right with the correct answer. These wrong words are usually called as destructors. This means that there are no destructors, which are similar to right answer. Therefore, it doesn’t make any bias to the learners while determining their choice.

4) Attempt to prepare clear and simple instructions. This means that it doesn’t need a lot of time to figure out the instructions. As a result, the learners will never feel any confusion when reading the instructions.

Besides that, you’d better keep in your mind that usually only content words (nouns, verbs, adjectives and adverbs) that are included in vocabulary tests. Function words like: articles, determiners, prepositions, conjunctions, pronouns and auxiliary verbs usually appear in grammar tests.

2.5.3 Advantages and Limitations of Multiple-Choice Completion

Basically, every test used to evaluate English skills has either advantages or limitations, so does multiple-choice completion. After going through on this test, I finally find out the advantages of it, among others are: (1) it helps the students to see the whole meaning of the words by providing the original contexts, (2) it is easy and consistent in scoring and (3) it is the most appropriate device in measuring one’s
knowledge. Nevertheless, there must also be some limitations of this type of test. Those are: it is rather difficult to make a good sentence context that shows obviously the real meaning of the word being tested and it is easy for students to cheat by copying their friends’ answers. In order to make it clear, the teacher has to pay much attention to the mischievous learners and gives the firm punishment if necessary.
CHAPTER III
METHOD OF INVESTIGATION

This chapter deals with subject of the study, population of the study, sample and sampling technique of the study, research variables, type of data collection, instrument for collecting data, try out of the study, technique of data analysis, criteria of success and the administration of the test.

3.1 Subject of the Study

I carry out an action research since there are some previous researchers who conduct an applied research, especially for relationship between the use of multiple-choice questions and students’ vocabulary mastery. Based on the reason above, I intend to make the research to be more specific; that is, the use of multiple-choice completion to measure students’ vocabulary mastery. Another reason is that I intend to economize the time because when I conduct an action research there is no complicated step that I should take. Based on this research, I would like to carry out the action and the research at the same time. Competence Based Curriculum of 2004, which demands the fully attention on vocabulary items must be mastered by students both in Junior and Senior High School, nevertheless, it is not taught thoroughly. That’s why I did my research on the students of SMA 2 Pekalongan in this final project due to my curiosity about the students’ vocabulary mastery in that school.
3.2 Population of the Study

Population is a set of individuals that meets sampling criteria. Hadi (1980:220) states that population is a group of people or items in which the information is being collected. Arikunto (1996:115) also defines that population is a collection of all elements possessing one or more attributes of interest. The populations intended here are the second year students of SMA 2 Pekalongan in the academic year of 2006/2007 and the entire numbers of students in the school are around 250 persons. The population is grouped into seven classes stated in the following table:

<table>
<thead>
<tr>
<th>Class</th>
<th>Number of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>II IPS 1</td>
<td>35</td>
</tr>
<tr>
<td>II IPS 2</td>
<td>37</td>
</tr>
<tr>
<td>II IPS 3</td>
<td>36</td>
</tr>
<tr>
<td>II IPS 4</td>
<td>35</td>
</tr>
<tr>
<td>II IPA 1</td>
<td>36</td>
</tr>
<tr>
<td>II IPA 2</td>
<td>35</td>
</tr>
<tr>
<td>II IPA 3</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
<td>250</td>
</tr>
</tbody>
</table>

I take the population based on some considerations, such as time, money and researcher availability. Since the population is quite a lot considerable, it should be sampled for practical aim. More details about it will be presented in the following section.
3.3 Sample and Sampling Technique of the Study

Sample is a group of people or events drawn from a population. This definition is also reinforced by Arikunto that sample is a limited number of elements selected from the population in order to be representatives of that population. Suharsimi (1992:107) points out that if the number of subjects in a research is more than 100 persons, the researcher can take 10-15% of the population based on the capability of the researcher. In order to gain representative sampling, I apply cluster proportional random sampling. The reason why I choose this sampling technique is due to some considerations, as follows:

1) The population of the study consists of clusters or classes so I should involve all of respondents included in the classes without any exception. That’s why it is called cluster.

2) It could also be called proportional due to the number of each class is not equal. Therefore, the sample should be selected proportionally.

3) It’s also random because each student involved in the sample has the same chance.

Based on the explanation above cited by Suharsimi, I finally decided that I had to take 15% of the entire population and the number of sample was around 36 respondents. From the seven classes, I then picked up 5.35 of each class. It became more or less 5 respondents after being rounded down to 5.00, except for class of II IPS 2 because it consisted of 6 samples. The details of samples drawn from each class are in the following table:
Table 3: The Drawn Sample of Each Class

<table>
<thead>
<tr>
<th>Class</th>
<th>Total</th>
<th>Drawn Sample</th>
<th>Rounding</th>
</tr>
</thead>
<tbody>
<tr>
<td>II IPS 1</td>
<td>35</td>
<td>5.25</td>
<td>5</td>
</tr>
<tr>
<td>II IPS 2</td>
<td>37</td>
<td>5.55</td>
<td>6</td>
</tr>
<tr>
<td>II IPS 3</td>
<td>36</td>
<td>5.40</td>
<td>5</td>
</tr>
<tr>
<td>II IPS 4</td>
<td>35</td>
<td>5.25</td>
<td>5</td>
</tr>
<tr>
<td>II IPA 1</td>
<td>36</td>
<td>5.40</td>
<td>5</td>
</tr>
<tr>
<td>II IPA 2</td>
<td>35</td>
<td>5.25</td>
<td>5</td>
</tr>
<tr>
<td>II IPA 3</td>
<td>36</td>
<td>5.40</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>250</td>
<td>36</td>
<td></td>
</tr>
</tbody>
</table>

Then, I must select these samples randomly by means of a lottery. Let’s take II IPS 3 as an example. The procedure of drawing samples could be seen in the following section:

1) I formerly wrote down the name of each respondent in the class of II IPS 3 in small pieces of paper. One piece was for one name.
2) All small pieces of paper were rolled and put into a can.
3) I then shook the can and dropped 5 rolled pieces of the paper at a time.
4) The process was repeated until the thirty-six samples were achieved.
5) Finally, I wrote down the name of these selected respondents as samples.

From the 36 students, data will be collected. However, to get the data I need an appropriate instrument. Below is the thorough discussion about the instrument of my study.
3.4 Research Variables

Variable is something, which varies in many ways. Basically, there are two types of variables in the research, as follows:

1) Dependent variable: vocabulary mastery of second year students of SMA 2 Pekalongan.

2) Independent variable: The use of multiple-choice completion.

From the two variables, I then try to create a hypothesis. Actually, the hypothesis is based on Null hypothesis, which says, “There is no correlation between multiple-choice completion and students’ vocabulary mastery.” Since I conduct an action research, then, I replace the Null hypothesis to be working hypothesis. The hypothesis is the use of multiple-choice completion and students’ vocabulary mastery is positively related.

3.5 Type of Data Collection

Commonly, there are two types of data collections, such as: qualitative and quantitative data. Due to dealing with numbers and groups, the appropriate data in this study are quantitative.

3.6 Instrument for Collecting Data

Arikunto (1996:139) says that an instrument is a means that plays an important role to collect data in a research. Thus, it is very important to create an adequate instrument for collecting the data. Saleh (2004:37:38) cites that there are five instruments in a research. Those are: questionnaire, interview, observation, test and
documentation. In this case, I make use of a test. The test is used to measure the students’ vocabulary mastery and the type of test that I apply here is multiple-choice completion as the instrument for collecting the data because this is the best way to assess students’ mastery in vocabulary. To answer the test, the respondents must fill in the deleting words of a sentence with the right words or phrases stated among the four options below the sentence. In taking the test, I applied the same procedure as sampling the population. Since the vocabulary items that should be mastered by second year students of Senior High School are around 400 words, I then picked up 10% of the total number of the items to be the sample of the test. Consequently, I found 40 items. The respondents would get the highest score up to 100 or it could be said that they got 40 points if they could answer all questions correctly. Since one correct answer was provided 1 point, I must also list the raw score of the respondents by calculating the number of correct answer of each respondent. Then, I formulated it into score by multiplying the number of right answer by 2.5. As a result, the respondents who got 40 points would get 100 scores.

3.7 The Try Out of the Study
Before the prepared instrument were used to collect data, it was ought to be tried out to 36 second year students of SMA 4 Pekalongan in the academic year of 2006/2007. The try out test covered vocabulary test, which was relevant to the materials taught in the school and the test was also related to competence-based curriculum that was provided to the recent students. The test consisted of 40 items and each item covered four options. Then, the respondents must answer the whole items correctly. The try-
out is intended to measure how far the respondents have mastered their vocabulary. However, I should also find out whether or not the test that I administrated had met the requirement of Level of Difficulty (LD) and also Discriminating Power (DP) before going further on reliability and validity. The test, which meets the requirement of LD and DP, is either too easy or difficult. Henning (1987:52-54) cites the criterion of LD and DP that if the final result of the computation is between 0.3 and 0.8, the test is considered medium and if it is below 0.3, it is called difficult, meanwhile, if it is above 0.8, it is considered easy. Consequently, I have to conduct an item test analysis first. Below is the thorough explanation about item test analysis. Actually, there are some steps that I should do when conducting the item test analysis, as follows:

1) Make a table comprising of: number of respondents, number of items and sum of correct answers.
2) Identify the correct answers of each item by giving a symbol (1) and the wrong answers of each item by providing a symbol (0).
3) Calculate the number of respondents who get correct answers.
4) Put the correct answers (raw scores) in series from top to down group a long with the number of each respondent in a column form.
5) Take 27% of the total number of the respondents from upper to lower group.
6) Sign the identified respondents (27% of the respondents from upper to lower group) by giving some certain marks.
7) Analyze the total number of correct answers gained by the identified respondents.
8) Calculate LD and DP of the whole items as the formula given above.

9) Determine each item, which meet the requirement of either LD or DP as the criterion proposed by Henning.

10) Try to formulate the correct answer into scores in order to find reliability and validity of the test.

There are two main points in this case, such as Level of Difficulty and Discriminating Power that will be discussed more thoroughly in this following section:

1) Level of Difficulty (LD)

   Difficulty level is considered to be one of the most important characteristics of test items. Considering the difficulty level of items is important as it determines the results of tests, Henning (1987:49) points out:

   “Often, when tests are rejected as unreliable measures for a given sample of examinees, it is due to not so much to the carelessness of the items writers as to the misfit of item difficulty to person ability. Tests, which are either too difficult or too easy for a given group of examinees usually show low reliability. However, the same tests used with examinees of appropriate ability often prove highly reliable.”

   In this study, Level of Difficulty (LD) was calculated as the proportion of correct responses via the following formula:

   \[ ID = \frac{RU + RL}{N} \]

   Where:

   \[ ID \] = difficulty or proportion correct

   \[ RU + RL \] = sum of pupils who got the right items

   \[ N \] = number of pupils treated in the item analysis
Thus, the Level of Difficulty (LD) was obtained by summing the number of students in the upper group who got the right items (RU) and the number of students in the lower group who got the right items (RL). Afterwards, the sum of those groups was divided by the whole number of examinees treated in the item test analysis (total number of upper and lower group). Let’s take item No. 8 as an example, the students of upper group who obtained the right answers were 10 persons (RU) and the students who obtained the right answers from the lower one (RL) were 5 persons. The sum of them was 15. Afterwards, I divided it by the total number of upper and lower group (N) and the final result of the calculation was 0.75. This means that the item is neither too difficult nor too easy for the respondents. It is since the final calculation is between 0.3 and 0.8.

2) Discriminating Power

Be able to discriminate between weak and strong examinees in the ability being tested are also an important characteristic of a good test. Being difficult only, as pointed out by Henning is not sufficient information upon which to base on the decision ultimately to accept or to reject a given item. A good item should, on average, receive higher ratings from the high group than from the lower group (Payne, 1974:190). The formula to compute discriminating power is as follows:

\[
DP = \frac{RU - RL}{\frac{1}{2}N}
\]

Where:

- \(DP\) = Discriminating power
RU – RL = the differences between groups in the number of pupils who got the right items
1/2N = one-half the total number of examinees included in the item analysis

By using this formula, The DP of items was calculated. For instance, the discriminating power (DP) of the item No. 8 was obtained by subtracting from the number of students in the upper group who answered the item correctly (10) with the number of students in lower group who answered the item correctly (5) and divided by one-half the total of examinees included in the item analysis (10). Then, the final result was 0.5. This means that the ability between the weak and the strong students are nearly similar.

The final computation whether or not the try-out test had already met the requirement of LD and DP could be seen in Appendix 9 and the result of the try-out test, which was in the table form consisting of number of respondents, raw scores, real scores sum of the whole scores and also the mean of the scores could be seen in the next Appendix (10). The real scores were gained from the raw scores after being multiplied by 2.5. Let’s take an example of respondent No.8 who got 30 points in raw score. The point was then turned into real score to be 75.

A test will be considered as a good one if it meets the requirement of both reliability and validity. Below are more details about reliability and validity:

1) Reliability

Heaton (1984:155) mentions that reliability is also an essential characteristic of a good test. In a matter of vocabulary test, reliability has something to do with the
stability of students’ vocabulary mastery. It means that students will always obtain the same result if the same test is provided to the same students in different occasion, different place and different answer sheet. A test, which is considered as a reliable test after it meets the requirement of either LD or DP as discussed above. However, it still needs the requirement of reliability and validity. Henning (1987:60) says that the test will be considered either reliable or valid if it meets the requirement of the criteria that the final computation is between 0.00 and 1.00, whereas, if the test lies below 0.00 or it places above 1.00 the test is said to be both unreliable and invalid. Here is the following Pearson Product Moment formula:

\[
\frac{\sum \sum X Y - (\sum X)(\sum Y)}{\sqrt{[\sum \sum X^2 - (\sum X)^2][\sum \sum Y^2 - (\sum Y)^2]}}
\]

Where:
- \( r_{xy} \) = Reliability of the items
- \( N \) = Total number of respondents
- \( X \) = Scores obtained from the first test
- \( Y \) = Scores obtained from the second test
- \( \sum X^2 \) = Sum of the squared X scores
- \( \sum Y^2 \) = Sum of the squared Y scores
- \( \sum XY \) = Sum of the product of paired X and Y

After conducting the try-out, I found out that there were only 20 items of the whole items (40) that had already met the requirement of LD and DP. Then, I examined the twenty items to the respondents of other school at the same level, namely the second year students of SMA 2 Pekalongan. I provided the test twice in
order to find out the requirement of reliability. The final result was that the test was reliable after being calculated by the formula stated above. Here is the application of the formula:

\[
\rho_{XY} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{N \sum X^2 - (\sum X)^2} \sqrt{N \sum Y^2 - (\sum Y)^2}}
\]

\[
= \frac{36,171,925 - (2,495)(2,430)}{\sqrt{36,178,525 - (6,225,025) \sqrt{36,167,450 - (5,904,900)}}}
\]

\[
= \frac{36,171,925 - (2,495)(2,430)}{\sqrt{6,189,300 - 6,062,850}}
\]

\[
= \frac{126,450}{\sqrt{201,875(123,300)}}
\]

\[
= \frac{126,450}{126,450}
\]

\[
= \frac{126,450}{\sqrt{24,891,187,549}}
\]

\[
= \frac{126,450}{157,769.4124}
\]

\[
= 0.8
\]

From the final computation above, I could easily say that the result was reliable because it lied between 0.00 and 1.00. Meanwhile, the more details about the result of reliability test constructed in the table form could be seen in Appendix 11, 12 and 13.

2) Validity

Validity refers to the extent to which the results of an evaluation procedure serve the particular uses for which they are intended. If the results are used to describe students’ achievements, we should like them to represent all aspects of the achievements we wish to describe and to represent nothing else (Grondlund, 1976).
A test is said to be valid when it actually measures what it is supposed to be measured. Saleh (2004:56-58) says that validity is usually distinguished into three kinds (1) face validity, (2) content validity and (3) empirical or statistical validity. Here, I’m going to talk about them. The first is face validity. According to this validity, a test is said to be valid if the test is consulted firstly by the experts before it is being tested to the respondents. In applying this validity, I formerly consulted the test to the teacher who was teaching the respondents of my study. This was because I didn’t know precisely how far they had mastered vocabulary. The second one is content validity. The validity refers to the material being tested must be suitable with the Basic Course Outline and Competence-Based Curriculum. Therefore, I took a textbook related to the curriculum and the textbook was also used for the second year students of Senior High School only. Basically, there are around 400 vocabulary items listed in that book. The data will be presented as follows:

**Table 4: The List of Vocabulary Items**

<table>
<thead>
<tr>
<th>No.</th>
<th>Content words</th>
<th>Population</th>
<th>Sample of 10 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Noun</td>
<td>100</td>
<td>10</td>
</tr>
<tr>
<td>2.</td>
<td>Verb</td>
<td>100</td>
<td>10</td>
</tr>
<tr>
<td>3.</td>
<td>Adjective</td>
<td>100</td>
<td>10</td>
</tr>
<tr>
<td>4.</td>
<td>Adverb</td>
<td>100</td>
<td>10</td>
</tr>
<tr>
<td>Σ</td>
<td></td>
<td>400</td>
<td>40</td>
</tr>
</tbody>
</table>

Meanwhile, the distribution of the sample and the percentage of students’ vocabulary mastery in each content word could be found in the following table:
Table 5: The Distribution of the Sample and the Percentage

<table>
<thead>
<tr>
<th>Content words</th>
<th>No. Items</th>
<th>Models</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noun</td>
<td>5</td>
<td>Plato’s teaching had a great effect on Aristotle’s point of view about the world.</td>
<td>80.5%</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>The investigation regarding with the accident was handled by Mr. John, the chief of the police.</td>
<td>86.1%</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>We have to be careful to do something because dangers can come to anyone, anytime and anywhere.</td>
<td>88.8%</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Language is a means of communication used by human beings.</td>
<td>11.1%</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>In many regions of the world, water purification systems are either inadequate or nonexistent.</td>
<td>77.7%</td>
</tr>
<tr>
<td></td>
<td>36</td>
<td>“I want to paint, too.” “All right. Use that brush over there.”</td>
<td>91.6%</td>
</tr>
<tr>
<td></td>
<td>37</td>
<td>They drove to work in their new car.</td>
<td>41.6%</td>
</tr>
<tr>
<td></td>
<td>38</td>
<td>Max is one of English department students who is very good at every subject.</td>
<td>33.3%</td>
</tr>
<tr>
<td></td>
<td>39</td>
<td>Honesty is the main provision for us if we want to be trusted by someone else.</td>
<td>66.6%</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>If we want to have some cakes for our dinner, we should go to the bakery.</td>
<td>100%</td>
</tr>
<tr>
<td>Verb</td>
<td>1</td>
<td>Jim is recognized as a bad boy because of his unpleasant behavior toward everyone.</td>
<td>97.2%</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>It requires more energy to pass mathematics exam since we must concentrate on the items seriously.</td>
<td>5.5%</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>Frank has to prepare his equipments first before going on picnic.</td>
<td>97.2%</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>It’s not too difficult to learn vocabulary because it could be obtained through experience.</td>
<td>11.1%</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>Plastic is non-degradable waste that can’t be decayed by nature.</td>
<td>27.7%</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>That young man insulted the new policeman so that he hauled off and hit him.</td>
<td>72.2%</td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>We have to finish the final report this week.</td>
<td>86.1%</td>
</tr>
</tbody>
</table>
afternoon. Let’s start up the computer.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>I put my book here, however, there is no around. Do you know who has taken it?</td>
</tr>
<tr>
<td>25</td>
<td>Pollution occurs when substances such as volcanic fumes are emitted into the air.</td>
</tr>
<tr>
<td>26</td>
<td>A baby-sitter is a woman who has a duty to look after her master’s child.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adjective</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Piston is a vital part of engine because the machine cannot work well without it.</td>
<td>77.7%</td>
</tr>
<tr>
<td>4</td>
<td>“Redoxone” is a kind of supplementary food that can help to increase the immune system of human body.</td>
<td>94.4%</td>
</tr>
<tr>
<td>11</td>
<td>CPU is a series of computer devices, which consists of several complicated machineries.</td>
<td>88.8%</td>
</tr>
<tr>
<td>12</td>
<td>Water is the most abundant substance on the Earth’s surface.</td>
<td>69.4%</td>
</tr>
<tr>
<td>20</td>
<td>Brian and Smith had close relation since 1990 when they were at elementary school.</td>
<td>11.1%</td>
</tr>
<tr>
<td>27</td>
<td>Snow White had a stepmother and three stepsisters who were very wicked and tricky.</td>
<td>66.6%</td>
</tr>
<tr>
<td>28</td>
<td>Billy and his friends are tired after working out for at least an hour in the schoolyard.</td>
<td>97.2%</td>
</tr>
<tr>
<td>29</td>
<td>We cannot accuse Butt as the troublemaker of the riot if we do not have enough proof.</td>
<td>94.4%</td>
</tr>
<tr>
<td>30</td>
<td>Zack usually likes to do something foolish better than performing something useful.</td>
<td>75%</td>
</tr>
<tr>
<td>31</td>
<td>To express his surprise about the beautiful ocean, Joe said to Jane, “Wow it’s wonderful!”</td>
<td>97.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adverb</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Mr. Brown is lying on the bed while listening to the radio right now.</td>
<td>88.8%</td>
</tr>
<tr>
<td>8</td>
<td>Zen usually rides his motorcycle when going to school but he goes there on foot now.</td>
<td>86.1%</td>
</tr>
<tr>
<td>9</td>
<td>Jack formerly prays to the god before going outside.</td>
<td>33.3%</td>
</tr>
<tr>
<td>No.</td>
<td>Statement</td>
<td>Percentage</td>
</tr>
<tr>
<td>-----</td>
<td>---------------------------------------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>17</td>
<td>James studies hard every night, as a result, he has a good score in his each subject.</td>
<td>72.2%</td>
</tr>
<tr>
<td>18</td>
<td>By working together, Tom and Gery were able to manage the newly built library well.</td>
<td>97.2%</td>
</tr>
<tr>
<td>19</td>
<td>Normally, September is the worst month of the year for hurricane here.</td>
<td>27.7%</td>
</tr>
<tr>
<td>32</td>
<td>Even though Jasmine and Caroline are twins, they both widely differ from each other in their behavior.</td>
<td>50%</td>
</tr>
<tr>
<td>33</td>
<td>He could speak English so fluently that he makes his teacher proud.</td>
<td>83.3%</td>
</tr>
<tr>
<td>34</td>
<td>He is swimming with Anne in the swimming pool right now.</td>
<td>88.8%</td>
</tr>
<tr>
<td>35</td>
<td>I met Angelina yesterday when walking around the park near my apartment.</td>
<td>83.3%</td>
</tr>
</tbody>
</table>

The percentage stated above was obtained by summing the whole number of the right answers gained by each respondent and dividing them by the total numbers of the respondents, afterwards, they are multiplied by 100%. Let’s take an example of the fifth item, the total numbers of the right answers gained by each respondent were 29 and then they were divided by the total numbers of the respondents (36) persons, afterwards, they were multiplied by 100%. The final computation was around 80.5%. For further information about the wrong and the right answers could be found in Appendix 7.

Besides that, the test should also involve the third validity, that is, empirical or statistical validity. Empirical validity refers to the proof that the test scores have high correlation or slightly deviation if it is compared with the other test, which is drawn from the other source, so called standard test. Since this is statistical validity,
of course, it should be measured statistically. You could have a look the formula of this statistical calculation in the following section:

\[ r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}} \]

Where:

- \( r_{xy} \) = Validity of the items
- \( N \) = Total number of respondents
- \( X \) = Scores obtained from the first test
- \( Y \) = Scores obtained from the second test
- \( \sum X^2 \) = Sum of the squared X scores
- \( \sum Y^2 \) = Sum of the squared Y scores
- \( \sum XY \) = Sum of the product of paired X and Y

The application of the formula stated above could be seen in the following part:

\[ r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}} \]

\[ = \frac{36,174,975 - (2,495)(2,475)}{\sqrt{[36,178,525 - (6,225,025)][36,173,575 - (6,125,625)]}} \]

\[ = \frac{36,174,975 - (2,495)(2,475)}{\sqrt{6,299,100 - 6,175,125}} \]

\[ = \frac{36,174,975 - (2,495)(2,475)}{\sqrt{6,426,900 - 6,225,025(6,248,700 - 6,125,625)}} \]

\[ = \frac{36,174,975 - (2,495)(2,475)}{\sqrt{24,845,767,650}} \]

\[ = \frac{123,975}{157,625,3965} \]

\[ = 0.78 \]
Based on the final result, that is, 0.78, I could explain that the test was valid. This was since 0.78 lied between 0.00 and 1.00, whereas, the more information related to the raw and real scores of validity test and also the sum of the whole scores could be found in Appendix 14 and 15.

3.8 Technique of Data Analysis

In this part, I’m going to talk about the technique analysis of vocabulary test. This technique actually covers five points, as follows:

1) Scoring of the test
2) Tabulating and tabling the data of the items
3) Finding the mean
4) Matching the score obtained with the criteria of success
5) Concluding

3.9 Criteria of Success

To determine the students’ mastery in vocabulary, I make use of two criteria. Those are: standard criteria used by Basic Course Outline and “BAKUM (Bakat Umum)” Standard, Psychology Faculty of Indonesian University. According to Teaching and Learning Guideline (GBPP), the teaching and learning process can be continued to the other material if the students get 65% of material being tested and those who get fewer than 65% must attend the remedial treatment (Depdikbud, 1994:43). Meanwhile “Standar BAKUM” categorizes the standardization of students’ scores into the following criteria:
90-100: Excellent
80-89: Good
70-79: High average
60-69: Average
50-59: Low Average
40-49: Poor
<39: Failed

I use the criteria stated above to measure whether the students’ vocabulary mastery in the researched school has matched with the criteria of success or not.

3.10 The Administration of the Test

1) Preparation of the test

I prepared the test by designing the instrument and consulting the test firstly to my advisor whether there was a slightly grammatical error or the test was too difficult to the respondents. After it was approved and then I conducted the try out.

2) Administrating the try out test

The try out was conducted on November 9th 2006. The subjects of my study to attend the try out test were second year students of SMA 4 Pekalongan. I distributed the test in the first hour at 07.00 a.m. The reason was because the students’ brain at that time was still fresh. This meant that they hadn’t had any activities. Therefore, they could focus on finishing the test and they didn’t feel bored.
3) The Reliability and the validity test administration

The aim of delivering the real test was to find out the reliability of the test and to meet the requirement of validity. The reliability test was provided on November 16th and 23rd 2006 at SMA 2 Pekalongan, whereas, the time of conducting the test was the same with the time of distributing the try out test. After conducting both the try out and reliability test, I then administered the validity test on 30 of November 2006.
CHAPTER IV
ANALYSIS AND DISCUSSION OF THE STUDY

This chapter has something to do with two main parts. The first reports analysis of the test and the second provides interpretation of the results.

4.1 Analysis of the Test

To analyze the result of the respondents’ test as suggested in the previous chapter, I apply five steps. The following is the elaboration of each step:

4.1.1 Scoring of the Test

There are 40 items of multiple-choice completion test type in this study. The respondents finished the test in 60 minutes. A student would get 40 points if all of his answers were correct (2.5 points represent one correct answer). Let’s take an example of the student No. 10; the raw score or the sum of the right answer was 31. It was derived from: the total number of noun (7), verb (5), adjective (9) and adverb (10). The scores that the respondents got were 77.5 or 78 after being rounded up, whereas, the computation of the entire scores gained by all respondents could be found in Appendix 10.

4.1.2 Tabling and Tabulating

There are 36 computations of scores in analyzing the test since the study involves 36 respondents. After being scored so as to show its clarity, the result of the test was put into a table. The table of the result can be seen in Appendix 7 and 8. There are two
tables in this case. The first table is in Appendix 7 and the second one is located in Appendix 8. The first table consists of three columns including: the number of the respondents, the number of items and the sum of correct answers. The second one as listed in Appendix 8 consists of the sequence of the scores from the top to down including: the raw scores and the number of respondents arranged randomly based on the score obtained by each respondent.

4.1.3 The Mean

Mean is the average of a group of scores. Adding up all individual scores and dividing the sum of the whole scores by number of the entire respondents gain the computation of the means. The formula used for applying the mean is as follows:

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

Where,

- $\bar{X}$ = the mean
- $\sum X$ = the sum of scores, and
- $N$ = the number of respondents

Applying the formula, I could calculate the average of the score from the table in Appendix 10. The data are as follows:

- $\sum X = 2489$
- $N = 36$

Based on the formula stated above I could mention that the result of the computation is:
The average of score is 69 after being rounded down. This means that the respondents have mastered vocabulary around 69%. The percentage of the students’ vocabulary and the mean could be found in the following table:

**Table 6: The Mean of Student’s Vocabulary Mastery (%)**

<table>
<thead>
<tr>
<th>No</th>
<th>Content Words</th>
<th>Total Percentage of Students’ Vocabulary Mastery (%)</th>
<th>Mean (%)</th>
<th>Rounding (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Noun</td>
<td>677.3%</td>
<td>67.73%</td>
<td>68%</td>
</tr>
<tr>
<td>2</td>
<td>Verb</td>
<td>594.1%</td>
<td>59.41%</td>
<td>59%</td>
</tr>
<tr>
<td>3</td>
<td>Adjective</td>
<td>771.8%</td>
<td>77.18%</td>
<td>77%</td>
</tr>
<tr>
<td>4</td>
<td>Adverb</td>
<td>710.7%</td>
<td>71.07%</td>
<td>71%</td>
</tr>
<tr>
<td>Σ</td>
<td></td>
<td></td>
<td></td>
<td>275%</td>
</tr>
</tbody>
</table>

On the basis of the sum of rounded mean stated above, that is, 275%, I then divided it with the four content words and the final result was 68.75% or 69% after being rounded up.

4.1.4 Matching the Mean with the Criteria of Success

As previously stated, the average of students’ scores is 69 (69%). The result lies between 60-69 as cited in “Standar BAKUM.” Therefore, I could also point out that the result is categorized into average achievement. This is also suitable with the
criteria of success as cited in Basic Course Outline that if the percentage of students’ vocabulary mastery on average is above 65% the respondents don’t need to take the remedial treatment. This means that the students’ vocabulary mastery have met the requirement of the Basic Course Outline’s Criteria.

4.1.5 Concluding the Result

Referring to the criteria of success proposed by “Standar BAKUM” and teaching and learning guideline at Senior High School, the achievement of the respondents in vocabulary is regarded satisfactory or average. This is because the mean of their score is around 69. However, according to teaching and learning guideline at SMA, the respondents have minimally mastered the vocabulary targeted and the teaching-learning process can be continued to the other materials. To materialize that goal, the teacher must practice their students with some reading comprehensions, such as English novel, short story and magazine. The other aim has something to do with the curriculum used in Indonesia nowadays, that is, competence-based curriculum. According to the curriculum, the students must also master the vocabulary items rarely used. This is since the relevant textbook to the curriculum focuses on genres, which automatically have close correlation to the comprehensive understanding on the context of the sentences used in each paragraph. It is of course hard for the students to learn the genres if they do not have enough new vocabulary items in their mind.
4.2 The Interpretation of Data

After applying all techniques of research finding stated in Chapter III, I then move on the interpretation of the result in data analysis. From the vocabulary test analysis, I found out that the mean score is 69. This could be said that the students’ achievement is regarded satisfactory. This explanation is suitable with the criteria of success pointed out by both in teaching and learning guideline and “Standar BAKUM” proposed by Psychology College of Indonesian University. This is because it lies between 60 and 69 or above 65%.

However, according to the basic course outline, the teaching and learning process should be improved because the students’ achievement is all right but not so good. Therefore, the more exercises that are able to increase the student’s vocabulary mastery must be paid attention. It is actually not easy to do that because it involves the teamwork between the teacher and the students.
CHAPTER V
CONCLUSION AND SUGGESTION

Based on the analysis and interpretation discussed in Chapter IV, I’m going to go further on the next discussion, which covers two main parts. Those are: conclusion and suggestion. The more elaborations about those will be discussed as follows:

5.1 Conclusion

1) The mean score of students’ achievement gained in the researched school is 69.
2) With reference to teaching and learning guideline at SMA, the mean is considered average; nevertheless, it still requires improvement. This is since the students have minimally mastered the new vocabulary items.
3) As proposed by “Standar BAKUM” that the students’ acquisition in new vocabulary is still satisfactory. It means that the score is not enough if they want to be able to increase their vocabulary mastery. They have to learn more and more.

5.2 Suggestion

From the conclusion stated above, I would like to suggest that the teachers of English of second year students in SMA 2 should pay much attention in their students’ mastery of vocabulary and I also suggest that they have to know the result finding of the study and give more vocabulary exercises to increase their students’ vocabulary knowledge. Basically, the study is not just enough up to here. This is because you could probably continue the research in order to find out the other elements, which are not stated in this study.
BIBLIOGRAPHY


