

**THE CORRELATION BETWEEN STUDENTS' CRITICAL
THINKING AND VOCABULARY MASTERY AT SMAN 3
PALANGKA RAYA**

THESIS



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**STATE ISLAMIC INSTITUTE OF PALANGKA RAYA
FACULTY OF TEACHER TRAINING AND EDUCATION
LANGUAGE EDUCATION DEPARTMENT
STUDY PROGRAM OF ENGLISH EDUCATION
1439 H/2018**

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PALANGKA RAYA**

THESIS

Presented to
In partial fulfillment of the requirements
For the degree of *Sarjana* in English Language Education



By

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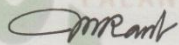
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Thesis Title : The Correlation between Students' Critical Thinking and
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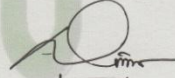
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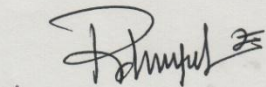
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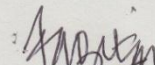
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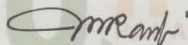
PERSETUJUAN PEMBIMBING

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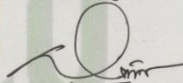
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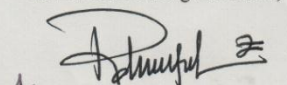
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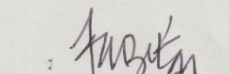
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Study Program : English Study Program

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Date : June, 5th 2018

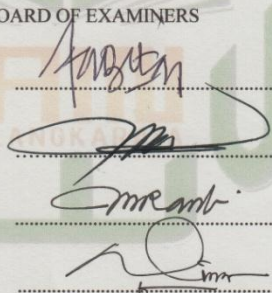
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Assalamualaikum Wr. Wb

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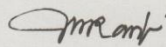
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Sarjana Pendidikan in the study program of English Education of the Language
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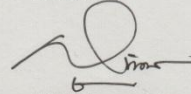
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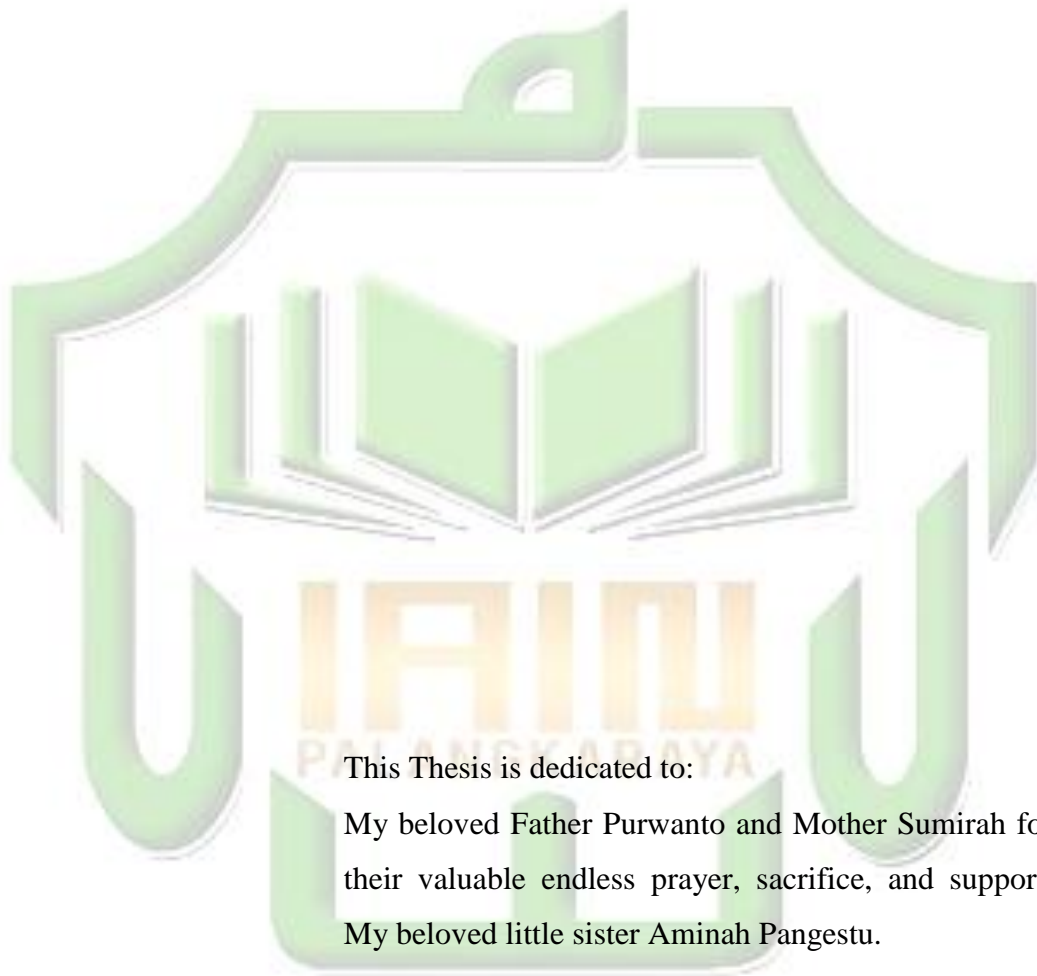
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MOTTO AND DEDICATION

“.....He who strives, strives for himself. Allah is the rich, independent of the worlds”

(Q.S Al-Ankabut (69): 6)



This Thesis is dedicated to:

My beloved Father Purwanto and Mother Sumirah for
their valuable endless prayer, sacrifice, and support.

My beloved little sister Aminah Pangestu.

DECLARATION OF AUTHORSHIP

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Declare that:

1. This thesis has never been submitted to any other tertiary education institution for any other academic degree.
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Palangka Raya, 24 May 2018

Yours Faithfully,




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ABSTRACT

Pratiwi, A. 2018. The Correlation between Students' Critical Thinking and Vocabulary Mastery at SMAN 3 Palangka Raya. Unpublished Thesis. Department of Language Education, Faculty of Teacher Training and Education, State Islamic Institute of Palangka Raya. Advisor (I) HJ. Apni Ranti, M. Hum; (II) Akhmad Ali Mirza, M.Pd

Key Words: *critical thinking, vocabulary mastery*

The aim of the research was to find out: the correlation between students' critical thinking and vocabulary mastery at SMAN 3 Palangka Raya. This study was focus to find out the correlation between students' critical thinking and vocabulary mastery of the tenth grade students of SMAN 3 Palangkaraya.

The research type was quantitative. In collecting the data, the researcher used questionnaire and test. The population of the study were the tenth grade students of SMAN 3 Palangkaraya. The sample of the study consisted of 36 students. The Method of sampling in this study was cluster random sampling. The technique of collecting data of students' critical thinking by using questionnaire. The technique of collecting data of vocabulary mastery was test. The technique of data analysis used the Pearson product moment correlation.

The research findings show that there is positive correlation between students' critical thinking and vocabulary mastery at SMAN 3 Palangka Raya ($r_{xy} = 0.411 > r_{table} = 0.339$). So, the alternative hypotesis (H_a) is accepted and null hypotesis (H_o) is rejected. The meaning of this statement is the students' critical thinking has positive relationship or influence to students' vocabulary mastery.

ABSTRAK

Pratiwi, A. 2018. Hubungan antara Pemikiran Kritis Siswa Dan Penguasaan Kosakata di SMAN 3 Palangka Raya. Skripsi tidak diterbitkan. Jurusan Pendidikan Bahasa. Fakultas Tarbiyah dan Ilmu Keguruan, Institut Agama Islam Negeri Palangka Raya. Pembimbing (I) HJ. Apni Ranti, M. Hum; (II) Akhmad Ali Mirza, M.Pd

Kata kunci : pemikiran kritis, penguasaan kosakata

Tujuan penelitian ini adalah untuk mengetahui: Korelasi antara pemikiran kritis siswa dan penguasaan kosakata di SMAN 3 Palangkaraya. Penelitian ini fokus untuk mengetahui hubungan antara berpikir kritis siswa dan penguasaan kosakata siswa kelas X SMAN 3 Palangkaraya.

Jenis penelitian adalah kuantitatif. Dalam mengumpulkan data, peneliti menggunakan kuesioner dan tes. Populasi penelitian adalah siswa kelas X SMAN 3 Palangkaraya. Sample penelitian terdiri dari 36 siswa. Metode pengambilan sampel dalam penelitian ini adalah cluster random sampling. Teknik pengumpulan data pemikiran kritis siswa menggunakan kuesioner. Teknik pengumpulan data penguasaan kosakata menggunakan tes.. Teknik analisis data menggunakan korelasi Pearson product moment.

Temuan penelitian menunjukkan bahwa ada korelasi positif yang sedang antara pemikiran kritis siswa dan penguasaan kosakata mereka ($r_{xy} = 0.411 > r_{table} = 0.339$). Alternatif hipotesis (H_a) diterima dan hipotesis nol (H_o) ditolak. Makna dari pernyataan ini adalah pemikiran kritis siswa memiliki hubungan yang positif atau mempengaruhi penguasaan kosakata.

ACKNOWLEDGMENTS

The researcher would like to express her sincere gratitude to Allah SWT., for the blessing bestowed in her whole life particularly during the thesis writing without which this thesis would not have come to its final form. *Sholawat* and *salam* always be bestowed to the last prophet Muhammad SAW., having shown us the role of life to make our life true.

Her appreciation is addressed to:

1. Dean of Faculty of Teacher Training and Education of the State Islamic Institute of Palangka Raya, Drs. Fahmi, M. Pd., for his invaluable assistance both in academic and administrative matters.
2. Vice Dean in Academic Affairs, Dra. Hj. Raudhatul Jennah, M. Pd., for her invaluable assistance both in academic and administrative matters.
3. Chair of Language Department, Santi Erliana, M. Pd., for her invaluable assistance both in academic and administrative matters.
4. Chair of English Study Program, M. Zaini Miftah, M. Pd., for his invaluable assistance both in academic and administrative matters.
5. Her thesis advisors, Hj. Apni Ranti, M. Hum., and Akhmad Ali Mirza, M.Pd., for their generous advice, valuable guidance and elaborated correction during the completion of her thesis.
6. Both the members of the board of examiners, for their corrections, comments and suggestions which are profitable to the accomplishing of this thesis.
7. All lecturers of Study Program of English Education from whom she got in-depth knowledge of English and English teaching.

8. The headmaster, all teachers and staffs of SMAN 3 Palangka Raya.
9. The principal of tenth grade students for their participants to complete her research at SMAN 3 Palangka Raya.
10. Her classmates of Study Program of English Education, especially the 2014 period, for the support in sadness and happiness during the study in undergraduate program and for their spirits to accomplish her study.
11. Her beloved parents, Purwanto and Sumirah, for their moral support and endless prayer so that she is able to finish her study. May Allah SWT bless them all. *Aamiin.*

Palangka Raya, May 2018

The researcher,

Amana Pratiwi
NIM 1401120936

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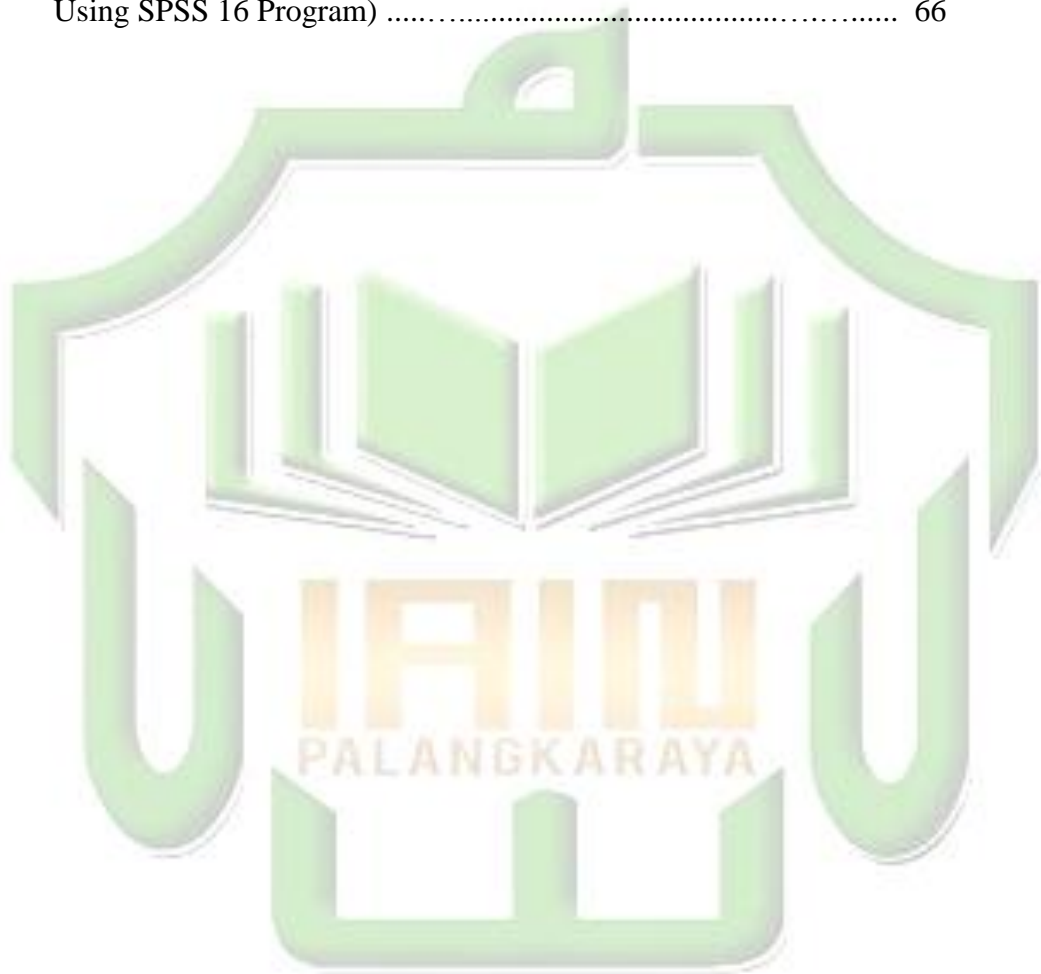
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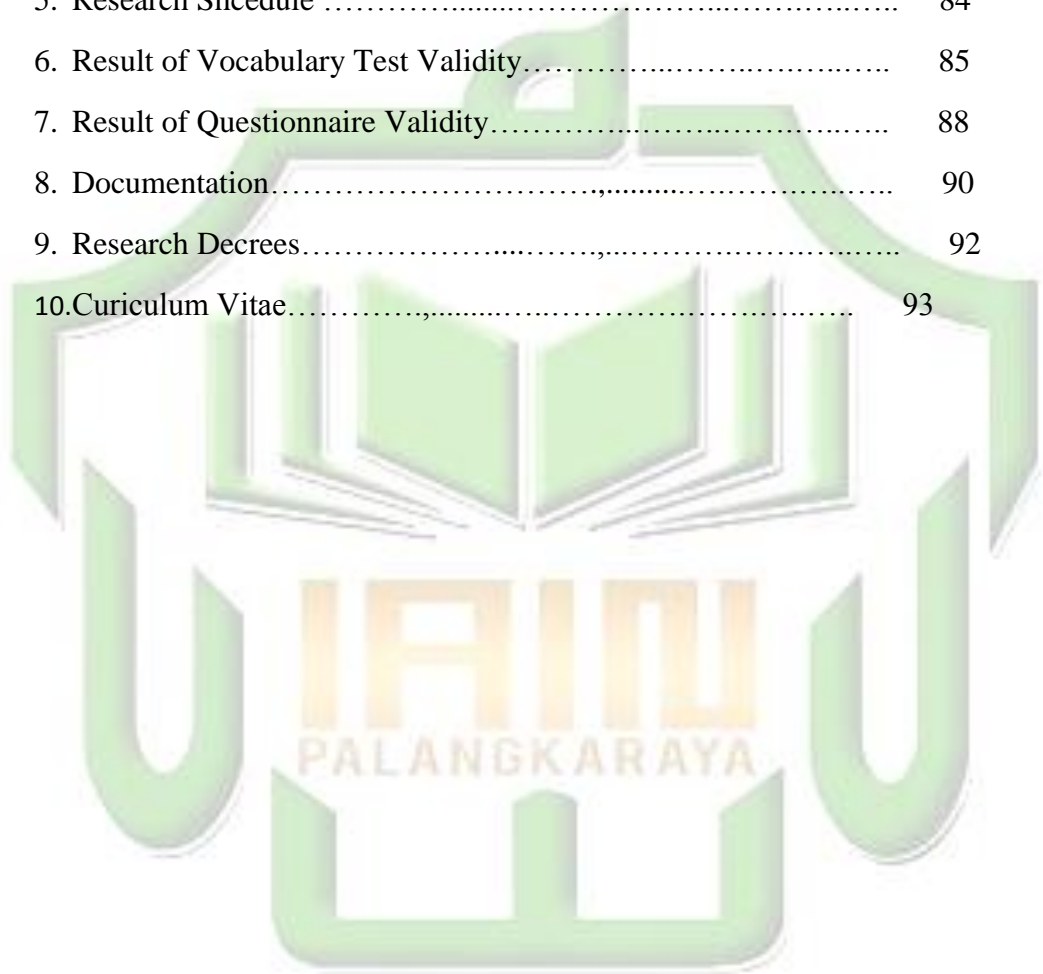
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CHAPTER 1

INTRODUCTION

This chapter discusses the background of the study, research problem, objective of the study, hypothesis of the study, assumption of the study, scope and limitation, significant of the study and definition of the key terms.

A. Background of The Study

English becomes very important for people to exchange meaning and represent their feeling and idea. Learning a foreign language is different from learning one's mother tongue. A foreign language is one not widely used in learners' immediate social context which might be used for future travel or other cross cultural communication situations, or studied as a curricular requirement or elective in school, but with no immediate practical application (Troike, 2006, p.4). A learner will meet a lot of difficulties in learning a foreign language because each language has its own vocabulary items and unfamiliar ways of arranging the words into sentences.

The one of important aspect of learning English as foreign language is vocabulary. Vocabulary as one of the knowledge areas in language, plays a great role for learners in acquiring a language (Alqahtani, 2015, p.22). Thus, one of the challenges that learners will encounter during the process of language learning is mastering vocabulary. Beside learning vocabulary as one of important thing in learning English as foreign language, there is a critical thinking skill as priority in the goals of education. Critical thinking is an important and vital topic in modern education. The purpose of

specifically teaching critical thinking in the sciences or any other discipline is to improve the thinking skills of students and thus better prepare them to succeed in the world.

Students need critical thinking in their academic life. They need to solve word problems in math class, to evaluate the difficulties they get in learning during the class, and to interpret the problem, before attempting to solve a problem, make sure that you know what the problem is. To identifying the problem, defining it very specifically and taking awnership of it, you need to gather as much information about it as possible. Problems do not disappear by themselves, so you must take ownership of them.

Critical thinking is deliberate thinking because it always involves a clear purpose, a spesific goal. When you think critically, you are looking for reasons or explanations for events, considering various sides of an issue, attempting to solve the problem, coming to a decision, or making sense of a situation (Pirozzi, 2003, p. 200).

According to Fahim and Komijani, critical thinking ability of learners correlated positively and significantly with their L2 vocabulary knowledge (Fahim & Komijani, 2011, p.35). Learning and thinking by stating that the only capacity we can use to learn is human thinking. It can be concluded that the utilization of critical thinking skills would help EFL students learn L2 vocabulary more effectively and profoundly (Fahim & Komijani, 2011, p.35).

Based on the researcher observation at SMA Negeri 3 Palangka Raya when teaching practice II, the researcher found out ; Student who have good critical thinking tend to have good vocabulary mastery in the class, but a few students who have good vocabulary but their critical thinking is low. Low critical thinking in this case means the students often think in ways that are unclear, imprecise, and inaccurate (Bassham, 2011, p.25). Based on the explanation above, the researcher is interested to correlate the critical thinking and vocabulary mastery, as Nejad reveal It is important that language learners should use lexicon precisely and critically. The lexicon is known as vocabulary, which is one of the most important components of Language (Nejad, 2016, p.26).

B. Research Question

The following problem needs to be found out its answer through this particular investigation:

Is there any significant correlation between student' critical thinking and their vocabulary mastery at SMA Negeri 3 Palangka Raya ?

C. Objective of the study

Based on the research problem this research is aimed at finding out:

Whether or not there is a significant correlation between the students' critical thinking and their vocabulary mastery.

D. Hypothesis of the study

Based on the statement of the problems presented earlier, the research hypothesis is stated as follows:

H_a : There is significant positive relationship between students' critical thinking and their vocabulary mastery.

H_o : There is no significant positive relationship between students' critical thinking and their vocabulary mastery.

E. Assumption

The assumption of the research is the student's critical thinking has a significant correlation towards mastering of English vocabulary.

F. Scope and limitation

The problem of this research will only focus on the students' critical thinking ability and vocabulary mastery of the tenth grade of SMA Negeri 3 Palangka Raya.

G. Significance of The Study

This research aims in this research, as well as identifying the ways to be critical student.

1. Theoretical

This research is expected to be a contribution of thought and increase mastering vocabulary and how to think critically. These research findings are expected to support the existence of the theories regarding with the second or foreign language learning, teaching and acquisition.

The purpose of specifically teaching critical thinking in the sciences or any other discipline is to improve the thinking skills of students.

2. Practical

For students the result of this research may become references in improving students' critical thinking through the vocabulary, to motivate the students how to be the active student in facing a problem reasonable. For teachers this research may provide an overview of critical thinking mastering vocabulary. For researcher, these research findings are expected to give the positive contribution and information.

H. The Definition of Key Terms

a. Correlation study

Correlation is the relationship between two or more variables, or mutual relationship between two or more things.

b. Critical thinking

Critical thinking is skilled and active interpretation and evaluation of observations and communications, information and argumentation.

c. Vocabulary mastery.

Vocabulary is a component of a language that maintains all of information about meaning and using word in a language

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter discusses the related study, critical thinking and vocabulary mastery. The critical thinking discusses about the nature of critical thinking, the model of critical thinking, and the core of critical thinking. The vocabulary mastery discusses about the nature of vocabulary, the mastery of vocabulary, and the types of vocabulary.

A. Related Studies

In order to provide strong foundation of the present study, in this section the researcher presents some studies those closely related to the study. First of all, Mardalena (2012) tried to measure the relationship between critical thinking and listening comprehension of the second year students of MA Kampar Timur. The result of her study is shows that there is significant correlation between critical thinking and listening comprehension. The score of correlation coefficient obtained is 0.245 which is in the interval of 0.20 – 0.399. Thus, the relationship based on Hatono is categorized into 61 low. The value is higher than the value at both significance level 5% (0.250) and smaller than 1% (0.325) and hypothesis alternative is accepted and hypothesis null is rejected.

The other related studies by Mansoor Fahim and Ali Komijani (2005) tried to measured the relationship among Critical Thinking Ability, L2 Vocabulary Knowledge, and L2 Vocabulary Learning Strategies. The result of the study showed that there is positive correlation among the variables.

The measurement result is F_{observe} greater than F_{table} . It meant that alternative hypothesis is accepted and null hypothesis is rejected.

Then other related studies by Nooshin Azin and Hossein Heidari Tabrizi (2006) tried to measured the relationship between critical thinking ability of Iranian English translation students and their translation ability. The results of the study showed that there is a significant relationship between the critical thinking ability of Iranian translation students and their translation ability. The obtained coefficient of correlation between critical ability and translation ability is 0.232 which is considered significant at $p \leq 0.05$ level. It means as critical abilities of students increase, their translation scores raise as well.

Then, the research by Noushin Boroushaki (2016) entitled “Critical Thinking Ability and Vocabulary Learning Strategy Use: The Case of EFL Learners in an ESL Context”. The results indicated a significant relationship between critical thinking and vocabulary learning strategy use.

The other related study by Cetin Semerci (2010) tried to measured the correlation between achievement focused motivation and critical thinking. “The conclusion is Majority of the correlations between sub-dimensions of Achievement Focused Motivation (AFM) and critical thinking (CT) skills was found positive out of systematicity in CT. Two of them are as follows: (1) there is a correlation of 0.42 between AFM and self-confidence, (2) There is a correlation of .37 between AFM and inquisitiveness.

The similarities of current study and the previous studies is similar to correlational study and focus on critical thinking. But there are also some differences such as the previous researchers correlated among English skills or some other language components.

B. Critical Thinking

1. The Nature Of Critical Thinking

Bailin (2002) in Lai defines critical thinking as thinking of a particular quality essentially good thinking that meets specified criteria or standards of adequacy and accuracy (Lai, 2011, p.5). Critical thinking is the general term given to a wide range of cognitive skills and intellectual dispositions needed to effectively identify, analyze, and evaluate arguments and truth claims; to discover and overcome personal preconceptions and biases; to formulate and present convincing reasons in support of conclusions; and to make reasonable, intelligent decisions about what to believe and what to do (Bassham, et al, 2011, p.1).

The researcher can conclude that critical thinking is an important thing in solving the problem because critical thinking is a mode of thinking about any subject, content, or problem in which the thinker improves the quality of his or her thinking by skillfully analyzing, assessing, and reconstructing it. It can also help people succeed in their careers by improving their ability to solve problems, think creatively, and communicate their ideas clearly and effectively.

2. The Core of Critical Thinking

Facione suggests six cores of critical thinking, there are as factors (Facione, 2011, p.5):

a. Interpretation

Interpretation is to comprehend and express the meaning or significance of a wide variety of experiences, situations, data, events, judgments, conventions, beliefs, rules, procedures, or criteria (Facione, 2011, p.5).

b. Analysis

Analysis is to identify the intended and actual inferential relationships among statements, questions, concepts, descriptions, or other forms of representation intended to express belief, judgment, experiences, reasons, information, or opinions. Analysis includes examining Ideas, identifying arguments and analyzing arguments (Facione, 2011, p.5).

c. Evaluation

Evaluation as meaning to assess the credibility of statements or other representations which are accounts or descriptions of a person's perception, experience, situation, judgment, belief, or opinion (Facione, 2011, p.6).

d. Inference

Inference means to identify and secure elements needed to draw reasonable conclusions; to form conjectures and hypotheses; to

consider relevant information and to reduce the consequences flowing from data or other forms of representation (Facione, 2011, p.6).

e. Explanation

Explanation as being able to present in a cogent and coherent way the results of one's reasoning (Facione, 2011, p.6). Evaluation aims to answer agreed questions and to make a judgment against specific criteria.

Explanation is an important skill for everyone, no matter what field students decide to pursue. Becoming good at explanation requires practice, as do all skills. Explanation refers to the ability to explain the assumptions that lead to the conclusions reached.

f. Self-regulation

Self-regulation to mean self-consciously to monitor one's cognitive activities, the elements used in those activities, and the results educed, particularly by applying skills (Facione, 2011, p.7).

3. Characteristics of Critical Thinking

According to Pirozzi, how do you know for sure when you are thinking critically ? the answer to that question involves a discussion of its characteristics. Critical thinking requires (Pirozzi, 2003, p. 97) :

a. Flexibility

Critical thinking is flexible thinking because it involves willingness to consider various possibilities before coming to a

conclusion. Critical thinkers do not jump to conclusions or automatically accept what they first see, hear or read. They are willing to gather and consider additional information, even if it does not support what they initially think or want to do. Even though you may have been tempted to take the quick and easy way out, you delayed decision until you had a chance to gather more information. Realizing that your first reaction to the course was negative, you still managed to keep an open mind and were willing to consider carefully other viewpoints.

b. A clear purpose

Critical thinking is deliberate thinking because it always involves clear purpose, a specific goal. When you think critically, you are looking for reasons or explanations for events considering various sides of an issue, attempting to solve a problem, coming to a decision, or making sense of a situation. In the course example, the decision whether to register for the course was the purpose you, as a critical thinker, had in mind.

c. Organization

Students complain that lack of time makes it difficult for them to accomplish everything that they have to do. There is no doubt that their lives are very busy, with classes to attend, assignments to be completed, studying to be done, and tests to be taken. The students probably schedule their daily activities very carefully so that they are

able to get everything done. In other word, you use organization or careful planning, to make the most productive use of your limited time. Critical thinkers also depend on organization to help them deal effectively with events, issues, problems, decisions, and situations.

d. Time and effort

At this point, it is probably obvious to you that critical thinking requires much time and effort. Furthermore, critical thinkers are willing to take time away from other activities so that they can concentrate on a specific event, issue, problem decision, or situation. The examples you have read about and the activities that you have been asked to complete all involve not only setting aside time but also putting in extra effort.

e. Asking questions and finding answer

Critical thinkers are aware of what is going on around them. They observe their surroundings carefully and put substantial effort into looking for causes, explanations or reasons. In other words, critical thinkers ask questions continuously and are very patient and persistent when trying to find answers. They often use words that are found in questions, such as who, when, what, where, how, and why.

f. Research

Critical thinking is a way of dealing with events, issues, problems, decisions, or situations in every thoughtful, careful manner. For that reason, it often requires research, the process of

looking for and gathering information to increase knowledge and understanding of a given topic. The kind of research that critical thinkers do and the sources of information that they use will vary with the matter at hand. For example, if a young man wants to find out more about the issue of gun control, he might go to the library or use the internet to read about the topic in newspapers, magazines, books, or reports. As these examples illustrate, critical thinkers are careful about using the source that are most relevant, applicable, or appropriate and therefore most likely to provide useful, reliable information. Information that is not only specific to the topic, but also accurate and trustworthy.

g. Coming to logical conclusion

After completing research, critical thinkers try to come to logical conclusions about the events, issues, problems, decisions, or situations they are considering. Conclusions are logical or reasonable if they are based solidly on the information or evidence gathered. A logical conclusion would be that this driver was responsible for the accident certainly most of the information points in that direction. However, that conclusion could change if additional evidence comes to light that points to one person as the culprit.

According to Dewey in Brian (2012), students can start their critical thinking with a task, like weaving or sewing, and then basic

question of inquiry can be asked like; Where do these materials come from ? Who made them ? (Brian, 2012, p. 30).

According to Bassham, there are characteristics of critical thinkers and uncritical thinkers (Bassham, 2011, p.25):

Table 2.1
Characteristics Of Critical Thinkers And Uncritical Thinkers

No	Critical Thinkers...	Uncritical Thinkers...
1.	Have a passionate drive for clarity precision, accuracy, and other critical thinking standards.	Often think in ways that are unclear, imprecise, and inaccurate.
2.	Are sensitive to ways in which critical thinking can be skewed by egocentrism, sociocentrism, wishful thinking, and other impediments.	Often fall prey to egocentrism, sociocentrism, relativistic thinking, unwarranted assumptions, and wishful thinking.
3.	Are skilled at understanding, analyzing, and evaluating arguments and viewpoints.	Often misunderstand or evaluate unfairly arguments and viewpoints.
4.	Reason logically and draw appropriate conclusions from evidence and data.	Think illogically and draw unsupported conclusions from evidence and data.
5.	Are intellectually honest with themselves, acknowledging what they don't know and recognizing their limitations.	Pretend they know more than they do and ignore their limitations.
6.	Listen open-mindedly to opposing points of view and welcome criticisms of beliefs and assumptions.	Are closed-minded and resist criticisms of beliefs and assumptions.
7.	Base their beliefs on facts and evidence rather than on personal	Often base beliefs on mere personal preference or

	preference or self-interest.	selfinterest.
8.	Are aware of the biases and preconceptions that shape the way they perceive the world.	Lack awareness of their own biases and preconceptions.
9.	Think independently and are not afraid to disagree with group opinion.	Tend to engage in “groupthink,” uncritically following the beliefs and values of the crowd.
10.	Are able to get to the heart of an issue or a problem, without being distracted by details.	Are easily distracted and lack the ability to zero in on the essence of an issue or a problem.
11.	Have the intellectual courage to face and assess fairly ideas that challenge even their most basic beliefs.	Fear and resist ideas that challenge their basic beliefs.
12.	Pursue truth and are curious about a wide range of issues.	Are often relatively indifferent to truth and lack curiosity.
13.	Have the intellectual perseverance to pursue insights or truths despite obstacles or difficulties	Tend not to persevere when they encounter intellectual obstacles or difficulties.

C. Vocabulary

1. The Nature of Vocabulary

Vocabulary is the total number of words that are needed to communicate ideas and express the speakers' meaning (Alqahtani, 2015, p.25). Vocabulary can be defined as words we must know to communicate effectively, words in speaking and words in listening. That is the reason why it is important to learn vocabulary.

Based on explanation above, the researcher concluded that vocabulary is a word that person know. Vocabulary is the form all of the words that human being use to communicate each other. Through vocabulary, people convey that they want to say and receive what they want to hear.

Building up a useful vocabulary is central to the learning of a foreign language at primary level. Since vocabulary is all about words, and good mastery of vocabulary helps someone understand language. It is supported by Wallace (1982) in Alqahtani who says that vocabulary is one of the most important parts of languages, because when speaking a language, the speakers need several words to convey ideas. In order to understand the language, vocabulary is crucial to be mastered by the learner. (Alqahtani, 2015, p.26).

2. Types of Vocabulary

Some experts in Alqahtani (2015) divide vocabulary into two types: active and passive vocabulary (Alqahtani, 2015, p.25). Active vocabulary refers to the one that the students have been taught and that they are expected to be able to use. Meanwhile, passive vocabulary refers to the words which the students will recognize when they meet them, but which they will probably not be able to pronounce.

In vocabulary, there are two types of word ; Function words and content words (Thornbury, 2002, p.4).

a. Function Words

Function words are words that have little lexical meaning or have ambiguous meaning, but instead serve to express grammatical relationship with other words within a sentence, or specific attitude or mood of the speaker. They signal the structural relationships that words have to one another and are the glue that holds sentences together. Thus, they served as important elements to the English Structures of sentence. Function words might be preposition, conjunction, determiner and pronoun. All of which belong to group of closed-class words.

1) Prepositions

Prepositions are words or group of words that is used to show the way in which other words are connected and use to expression the time . Example , for, in, at on.(Azar, 2003, p.161)

2) Conjunctions

Conjunctions are words used to link words, phrases or clauses. Some common conjunctions were and, but and or.

3) Pronoun

Pronoun is a word that used in place of a noun or noun phrases. Example , her, she, they, etc.

4) Determiners

Determiners definite article, indefinite article, possessives, demonstratives, and quantifiers. Example, the, a, an, my, this, some, etc.

b. Content Words

Content words are words that have meaning. They can be compared to grammatical words, which are structural nouns, verbs, adjective, and adverbs.

1) Nouns

Nouns is divided into two types there were common noun and proper noun. Words for people, places and things are called common nouns, e.g, classroom, book, students etc. The names of particular people, places and things are proper nouns. They always begin with a capital letter e.g, Muhammad Ali, Mike Tyson.

2) Verbs

Verbs is indicate actions, things that happen, e.g. to bring, drink, sing.

3) Adjectives

Words that describe nouns are called adjectives (azar, 2003, p. 166). Adjectives is describe qualities of nouns (people and things) how they appear or behave, e.g. old, tall, foolish, wonderful.

4) Adverbs

Adverbs: indicate how a verb (activity) is applied, e.g.
gently, fully, badly.

3. The Mastery of Vocabulary

The mastery of language according to Fries as quoted by Alqahtani is meant as the ability to use or to understand “all the words” of the language. Vocabulary mastery is people’s ability to use or to understand words of language that they have learned in certain situations which they really have experienced in their lives (Alqahtani, 2015, p.26). Vocabulary mastery is not only knowing the words and its meanings, but also knowing about how the words sound and how the words are used in the context.

Teaching vocabulary is clearly more than just presenting new words. There are some issues about vocabulary teaching. For example, students see a lot of words in the course. Some of them are used straight away, whereas the others are not. We have to remember that the students’ ability to use or understand words need a long time and process. However, we can learn a few lexical items that are most useful in particular situations and we try to master them first.

There are two kinds of vocabulary mastery. They are passive and active. Passive vocabulary refers to words which the students will recognize when they meet them but which they will probably not be able

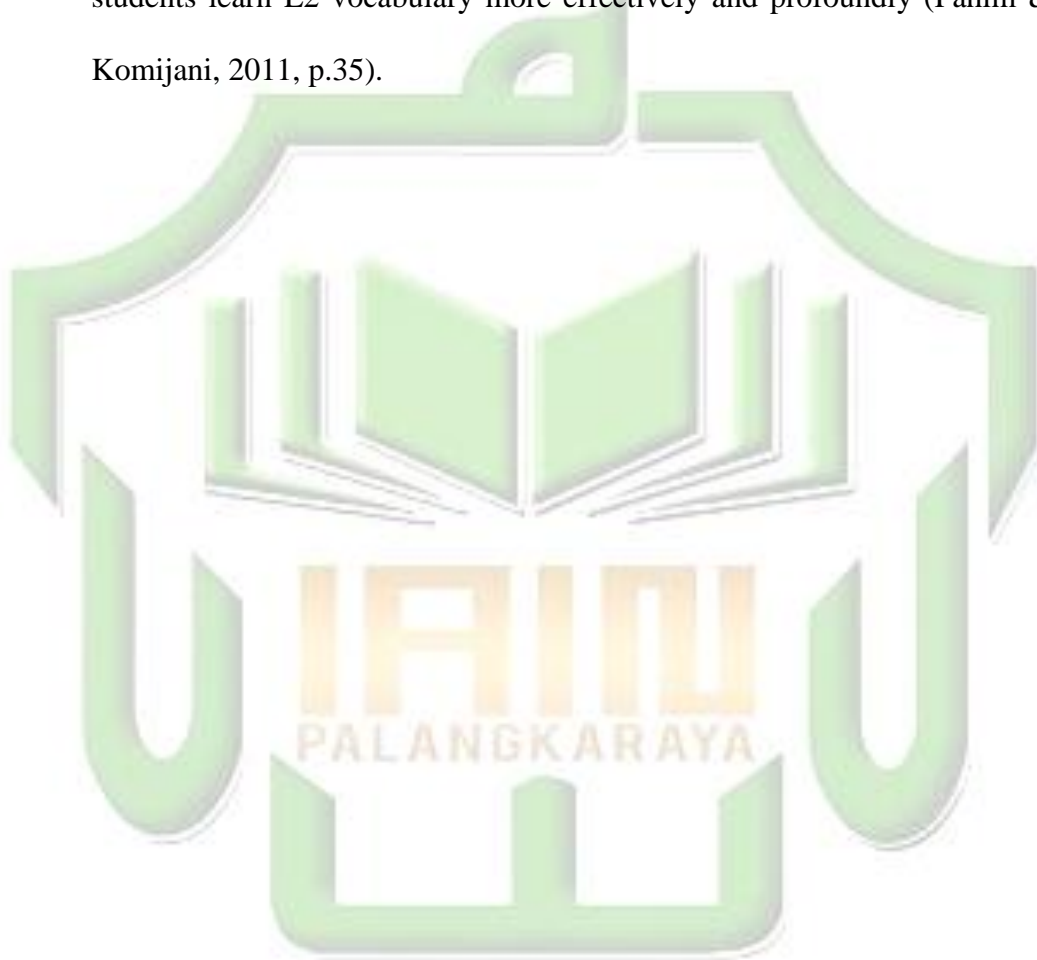
to produce. Whereas, the active vocabulary refers to vocabulary that students have been taught or learnt and which they are expected to be able to use.

D. The Critical Thinking and Vocabulary Mastery

Ku (2009) in Mansoor & Ali argues that critical thinking equips students with the competency necessary to deal quickly and effectively with everaccelerating changes of the new world. To develop such competency, students must go beyond textbook-knowledge absorption and learn to build up flexible intellectual skills involved in learning vocabulary (Fahim & Komijani, 2011, p.34). Kamali and Fahim (2011) found that critical thinking had significant effect on the participants' comprehension of text with learning unfamiliar vocabulary items. Mirzai (2008) also, reported that there is a significant relationship between critical thinking and lexical inferencing.

Critical thinking and vocabulary being the important role in learning. Mimbs (2005) and Halvorsen (2005) in Haghgoo assert that today critical thinking is an important skill in life, and that teachers need to integrate some of its key elements into their classrooms (Haghgoo, 2012, p.105). Vocabulary learning is an essential part in foreign language learning as the meanings of new words are very often emphasized, whether in books or in classrooms (Alqahtani, 2015, p.21). Critical thinking and vocabulary plays a role students' classroom.

According to Fahim and Komijani, critical thinking ability of learners correlated positively and significantly with their L2 vocabulary knowledge (Fahim & Komijani, 2011, p.35). Learning and thinking by stating that the only capacity we can use to learn is human thinking. It can be concluded that the utilization of critical thinking skills would help EFL students learn L2 vocabulary more effectively and profoundly (Fahim & Komijani, 2011, p.35).



CHAPTER III

RESEARCH METHODOLOGY

This chapter discusses about the research method in the present study. It consisted of research design, variable of the study, population and sample, research instruments, data collection procedures and data analysis procedures.

A. Research Design

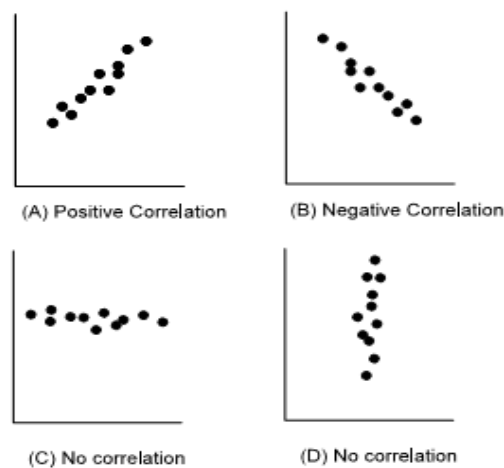
Based on the problem of the study, the researcher used quantitative research. The study used the correlational design. A correlation is the measurement of the co-relationship between two or more variables using correlational statistic to investigate the precise degree of their relationship (Latief, 2014, p.112).

Correlational research assesses the relationships among two or more variables in a single group. The correlation is indicated by correlation coefficient represented with numbers from 0 to 1 showing the degree of relationship, and the direction of the correlation indicated with (-) showing negative correlation and (+) showing positive correlation.

The researcher tried to measure the correlation between students' critical thinking and vocabulary mastery of the tenth grade at SMAN 3 Palangka Raya. Ary et al (2010 : 132) also stated that a scatterplot illustrates the direction of the relationship between the variables. A scatterplot with dots going from lower left to upper right indicate a positive

correlation . one with dots going from upper left to lower right indicates a negative correlation.

Figure 3.1
The Scatterplots



B. Place and Time

This research was conducted at SMA Negeri 3 Palangka Raya, which was located at Jl. George Obos. No. 12, Palangka Raya. It was conducted for two months.

C. Variable of The Study

Variable is defined as “characteristics that tend to differ from individual to individual, though or more individuals may have the same variable trait or measure”(Latif, 2014, p.11). In this research there are two continuous variables : critical thinking and vocabulary mastery. When an attribute has an infinite number of values within a range, it is a continuous variable (Ary, 2010, p.37).

D. Population and Sample

1. Population

Population is the total number of the subjects of an investigation (Arikunto, 2002, p.108). The researcher concluded that population is a number of groups interest to the researcher, a number of groups which would like to make the results of the study to be reported. In this case, the population of the research was the tenth grade students of SMA Negeri 3 Palangka Raya in the academic year 2017/2018.

Table 3.1
The Total Number of The Tenth Grade of
SMA Negeri 3 Palangka Raya

NO	CLASS	STUDENT
1.	X MIA	129
2.	X IIS	151
3.	X IBBU	36
TOTAL		316

They were chosen as subjects of this research for the following reasons:

- a Specify the attitudes and critical thinking starting when they as beginner students in high school. (Sarigoz, 2012, p. 5317)
- b The students have been familiar with vocabulary.

2. Sample

A sample is a small group that is observed and a population is defined as all members of any well-defined class of people, events or

subjects. Sample is a part of population that is observed (Arikunto 2002, p.109).

In this research, the researcher used random sampling technique to choose the samples. According to Arikunto, in random sampling, if subject is more than 100, sample can be taken between 10%-15% or 20%-25% or more (Arikunto, 2002, p.112). Therefore, the researcher took 11% of the population and there were 36 students. The Researcher used simple random clustering sampling because the researcher choose the class randomly. According to Latief, when population is large and widely dispersed, gathering a simple random sample poses administrative problem, cluster random sampling technique involves the random selection of groups that already exists (Latief, 2014, p.185).

E. Research instrument

1. Research Instrument Development

a. Questionnaire

Questionnaires are any written instruments that present respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting from among existing answers (Zoltán Dörnyei, 2010, p.3). The questionnaire adapted from Sarigoz' research. The researcher translated the questionnaire into bahasa to facilitate the students to understand the meaning of the statement, the researcher made the

statement simpler and avoid the used of conjunction and comparison words. According to Hendriyadi, if the researcher adapted the questionnaire, the researcher can adjust the statement by changing the physical appearance, the number of the statement, or the negative sentence (Hendriyadi, 2016, p.172).

The questionnaire in this research was used to measure the students' critical thinking. This questionnaire described some questions for the respondents to know how is the students' critical thinking at of SMA NEGERI 3 Palangka Raya in the academic year 2017/2018. There were 30 items, which was measured by using 5 point Likert-type (always, often, sometime, seldom, never) with range of 5, 4, 3, 2, 1 for each. (See Appendix 1)

Table 3.2

The Blue Print of Critical Thinking

No	Indicators	Number of items	Item number
1.	Interpretation	5	1-5
2.	Analysis	5	6-10
3.	Evaluation	5	11-15
4.	Inference	5	16-20
5.	Explanation	5	21-25
6.	Self-regulatory	5	26-30

b. Test

According to Arikunto, test is used to measure the ability of the object in research (Arikunto, 2002). The researcher

used test to find out how is the students' vocabulary mastery. In this research, the test consisted of 50 items with five alternatives: A, B, C, D, or E. Before giving the test, the researcher explained the procedure for 10 minutes and continued by giving the test. (See appendix 2)

2. Instrument Try Out

Before the test used as an instrument to collect the data, it was tried out first to the students in another class. The critical thinking questionnaire and vocabulary test needs to be tried out to avoid questions that has unclear meaning and to add items that are very necessary or nagate items that are not relevan to the purpose of research. Through the try out the questionnaire and test tested its validity and reliability. The try out was administered to different class that were students of the tenth grade students as the subjects of the try out. The sample of try out there were 32 students. The first try out for critical thinking questionnaire and then continued to the second try out for vocabulary mastery test. Before giving the try out, the researcher explained the procedure for 10 minutes and continued by giving the test.

3. Instrument Validity

Validity is the most important consideration in developing and evaluating measuring instruments. Historically, validity was defined as the extent to which an instrument measured what is claimed

to measure (Ary, 2010, p.225). A test said to be valid when it can measure what is intended to be measured. In this research, instrument validity includes face validity, content validity and construct validity.

a) Face validity

According to Ary face validity is a term sometimes used in connection with a test's content (Ary, 2010, p.228). Face validity refers to the extent to which examinees believe the instrument is measuring what it is supposed to measure. The critical thinking questionnaire instrument was used to measure the critical thinking ability, and the vocabulary test was used to measure the vocabulary mastery.

b) Content validity

It is especially important for achievements tests. It is also a concern for other types of measuring instruments, such as personality and aptitude measures (Ary, 2010, p.228). Content validity refers to the degree to which the sample of items, tasks, or questions on a test representative of some defined universe or domain of content. In the present study, critical thinking questionnaire consisted of 30 test items. Meanwhile for the vocabulary test consisted 50 test items, it is presented by multiple choice. The researcher did not make the total number of each indicator balance, because it adjusts the difficulty level of the problem in each indicator.

Table 3.3
Content Specification of Items In Vocabulary Mastery Test

No	Indicator	Total Number	Description of test item
1.	Noun	7	1, 4, 7, 10, 11, 13, 20
2.	Verb	10	2, 8, 12, 14, 16, 17, 18, 21, 22, 23
3.	Adjective	6	3, 5, 6, 9, 15, 19
4.	Adverb	7	24, 25, 26, 27, 28, 29, 30
5.	Synonym	10	31, 32, 33, 34, 35, 36, 37, 38, 39, 40
6.	Antonym	10	41, 42, 43, 44, 45, 46, 47, 48, 49, 50

c) Construct validity

Construct validity is a slightly more complex issue relating to the internal structure of an instrument and the concept it is measuring (Tinambunan, 1988, p.12). In this case, after the instrument was constructed on the aspect that was measured based on a particular theory, then was consulted with experts.

4. Instrument Reliability

Reliability as referring to consistency of the score resulted from the assessment (Latief, 2014, p.213). Reliability of measuring instrument is the degree of consistency with which it measures whatever it is measuring. In other words, reliability refers to the consistency of the test score. Reliability is a necessary characteristic of any good test, for it to be valid at all a test must first be reliable as a measuring instrument.

F. Data Collection Procedure

Collecting data is the most important step in conducting the research. The procedures of collecting the data of this research involved several steps.

1. The first step, constructed the critical thinking questionnaire and vocabulary test.
2. The second, before conducting the try out, the researcher needed getting the headmaster of SMA Negeri 1 Palangka Raya and the English teacher's permission to do the observation.
3. The third, trying out the instruments to examine whether the instruments were valid or invalid.
4. The fourth, checking the result of the try out.
5. The sixth, the critical thinking questionnaires and vocabulary test were given to all respondents.
6. Checked the students answer r and gave the score by using formula:

$$S = \frac{n}{N} \times 100$$

Where: S = students' score
 n = number of true answer
 N = number of test items

Calculate the mean of the vocabulary mastery test score using formula :

$$M = \frac{\sum Y}{N}$$

Where : M = Mean

ΣY = the sum of scores vocabulary

N = number of the students

7. The last step, obtained the scores of critical thinking questionnaire and the vocabulary test and then computed the data.

G. Data Analysis Procedure

The aim of analyzing the data is to find the correlation between the students' critical thinking and their vocabulary mastery. The steps of data analysis procedure, there were: b

1. The data was obtained from the critical thinking questionnaire and vocabulary test.
2. After the data for this research were obtained, it is necessary to analyze by using statistical analysis technique in order to identify the contribution score of critical thinking questionnaire and vocabulary test.
3. Measured students' critical thinking, the alternative Option of the intended data on students' critical thinking level will be scored by Alternative option" Always" is scored = 5, " Often" is scored = 4, "Sometime" is scored = 3, "Seldom" is scored = 2, and " Never" is scored = 1.
4. Analyzed the total percentage of the students, level in critical thinking.
It can be calculated by using formula as follow :

$$P = \frac{F}{N} \times 100 : 5$$

Where : P : Percentage

F : Frequency

N : Total number

5. To know the students critical thinking, the researcher used the technique analysis of qualitative description with percentage and also to find out the level of the students critical thinking, the researcher uses category of measurement:

Table 3.4

Category of Measurement of Critical Thinking

No	Score	Categorized
1.	81 – 100	Very good
2.	61 – 80	Good
3.	41 – 60	Fair
4.	21 – 40	Bad
1.	0 – 20	Very bad

(Dwi & Ermayanti, 2016, p.178)

6. To find out the correlation between student' critical thinking and vocabulary mastery, the researcher used the formula of Product Moment by Pearson as follow :

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

Where: R_{XY} : Total coefficient of correlation

$\sum x$: Total value of score X

ΣY : Total value of score Y

ΣXY : Multiplication result between score X and Y

N : Number of students

7. To know the contribution of the variable X to variable Y the formula below was used :

$$KP = r^2 \times 100\%$$

Where : KP : determinant coefficient score

r : correlation coefficient score.

8. To know the value of t_{hitung} the formula below was used :

$$t_{value} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

Where : t_{value} : value t

r : the score of coefficient correlation

n : the number of sample.

In this research, the researcher used SPSS 16.0, because SPSS is probably the most common statistical data analysis software package used in educational research and it is available at most institutions of higher education.

CHAPTER IV

RESEARCH FINDINGS AND DISCUSSION

In this chapter, the researcher presented the data which had been collected from the research in the field of study which consists of description of the data, result of data analysis, and discussion.

A. Data Presentation

1. The Result of Questionnaire Critical Thinking

The researcher presented the data presentation of questionnaire critical thinking by showing the frequency and percentage based on the options of each items of questionnaire, it can be seen in the tables below:

TABLE 4.1

Item 1

Saya bisa memahami permasalahan yang saya hadapi

NO	Classification	Frequency	Percentage
1.	Always	3	8%
2.	Often	7	20%
3.	Sometime	26	72%
4.	Seldom	0	-
5.	Never	0	-
	Total	36	100%

Based on the table above 72% of the students choose option “sometime” and there are no students choose option “seldom” and

“never”. It indicates that most students sometime understand the problems they face.

TABLE 4.2

Item 2

Ketika menghadapi masalah, saya mencari informasi dari sumber lain untuk menyelesaikannya.

NO	Classification	Frequency	Percentage
1.	Always	5	14%
2.	Often	6	17%
3.	Sometime	11	30%
4.	Seldom	10	28%
5.	Never	4	11%
	Total	36	100%

Based on the table above 30% of the students choose option “sometime” and 11% of the students choose option “always”. It indicates that students sometime searched for information from other sources to solve the problem.

TABLE 4.3**Item 3**

Saya mampu menemukan cara-cara yang dapat memecahkan masalah tersebut.

NO	Classification	Frequency	Percentage
1.	Always	4	11%
2.	Often	11	30%
3.	Sometime	19	53%
4.	Seldom	2	6%
5.	Never	0	-
	Total	36	100%

Based on the table above 53% of the students choose option “sometime” and there are no students choose option “never”. It indicates that sometime students are able to find ways to solve the problem.

TABLE 4.4**Item 4**

Saya dapat mengorganisir/mengatur informasi yang saya peroleh.

NO	Classification	Frequency	Percentage
1.	Always	2	6%
2.	Often	13	36%
3.	Sometime	14	39%
4.	Seldom	7	19%
5.	Never	0	-
	Total	36	100%

Based on the table above 39% of the students choose option “sometime” and there are no students choose option “never”. It indicates that sometime students can organize the information they get.

TABLE 4.5**Item 5**

Saya dapat mengatur waktu sebaik mungkin untuk menyelesaikan masalah secara cepat dan tepat.

NO	Classification	Frequency	Percentage
1.	Always	3	8%
2.	Often	6	17%
3.	Sometime	17	48%
4.	Seldom	7	19%
5.	Never	3	8%
	Total	36	100%

Based on the table above 48% of the students choose option “sometime” and 3% students choose option “always” and “never”. It indicates that sometime students can manage the best time to solve the problem quickly and appropriately.

TABLE 4.6**Item 6**

Ketika mendapat sebuah masalah, saya mengerti apa yang harus saya lakukan.

NO	Classification	Frequency	Percentage
1.	Always	7	19%
2.	Often	13	36%
3.	Sometime	15	42%
4.	Seldom	1	3%
5.	Never	0	-
	Total	36	100%

Based on the table above 42% of the students choose option “sometime” and there are no students choose option “never”. It indicates that sometime students understood what they should do, when they get a problem.

TABLE 4.7

Item 7

Saya mampu membedakan antara fakta dan opini.

NO	Classification	Frequency	Percentage
1.	Always	10	28%
2.	Often	6	17%
3.	Sometime	15	41%
4.	Seldom	4	11%
5.	Never	1	3%
	Total	36	100%

Based on the table above 41% of the students choose option “sometime” and 3% students choose option “never”. It indicates that sometime students are able to distinguish between facts and opinions.

TABLE 4.8**Item 8**

Saya berhati-hati dalam memilih informasi yang saya peroleh apakah sesuai dengan masalah yang saya hadapi.

NO	Classification	Frequency	Percentage
1.	Always	13	36%
2.	Often	8	22%
3.	Sometime	9	25%
4.	Seldom	5	14%
5.	Never	1	3%
	Total	36	100%

Based on the table above 25% of the students choose option “sometime” and 3% students choose option “never”. It indicates that sometime students are careful in choosing the information they get if it suits their problem.

TABLE 4.9**Item 9**

Saya bisa memberikan penilaian yang akurat/sesuai terhadap sebuah masalah.

NO	Classification	Frequency	Percentage
1.	Always	3	8%
2.	Often	12	33%
3.	Sometime	12	33%
4.	Seldom	8	23%
5.	Never	1	3%
	Total	36	100%

Based on the table above 33% of the students choose option “often” and “sometime”, meanwhile 3% students choose option “never”. It indicates that some of the students can provide an accurate assessment of a problem.

TABLE 4.10

Item 10

Saya dapat menyimpulkan suatu masalah dengan pikiran saya.

NO	Classification	Frequency	Percentage
1.	Always	5	14%
2.	Often	19	53%
3.	Sometime	8	22%
4.	Seldom	3	8%
5.	Never	1	3%
	Total	36	100%

Based on the table above 53% of the students choose option “often” and 3% students choose option “never”. It indicates that most of the students can conclude a problem with their mind.

TABLE 4.11**Item 11**

Saya bisa memberi komentar terhadap suatu masalah.

NO	Classification	Frequency	Percentage
1.	Always	9	25%
2.	Often	11	31%
3.	Sometime	12	33%
4.	Seldom	4	11%
5.	Never	0	-
	Total	36	100%

Based on the table above 33% of the students choose option “sometime” and there are no students choose option “never”. It indicates that sometime students are giving comment on a problem.

TABLE 4.12**Item 12**

Saya mencari solusi dari suatu masalah dengan sabar dan gigih.

NO	Classification	Frequency	Percentage
1.	Always	7	19%
2.	Often	12	33%
3.	Sometime	11	31%
4.	Seldom	6	17%
5.	Never	0	-
	Total	36	100%

Based on the table above 33% of the students choose option “sometime” and there are no students choose option “never”. It indicates

that the most of the students are looking for a solution of a problem patiently and persistently.

TABLE 4.13

Item 13

Dengan pemikiran saya, saya bisa menilai suatu masalah.

NO	Classification	Frequency	Percentage
1.	Always	3	8%
2.	Often	16	45%
3.	Sometime	13	36%
4.	Seldom	4	11%
5.	Never	0	-
	Total	36	100%

Based on the table above 45% of the students choose option “often” and there are no students choose option “never”. It indicates that the most of the students can judge a problem by their thinking.

TABLE 4.14

Item 14

Saya mampu mengembangkan gagasan atau ide dari suatu informasi.

NO	Classification	Frequency	Percentage
1.	Always	2	6%
2.	Often	11	30%
3.	Sometime	14	39%
4.	Seldom	8	22%
5.	Never	1	3%
	Total	36	100%

Based on the table above 39% of the students choose option “sometime” and 3% of the students choose option “never”. It indicates that sometime students are able to develop an ideas of information.

TABLE 4.15

Item 15

Saya dapat menyimpulkan masalah yang dijelaskan.

NO	Classification	Frequency	Percentage
1.	Always	6	16%
2.	Often	11	30%
3.	Sometime	16	43%
4.	Seldom	4	11%
5.	Never	0	-
	Total	36	100%

Based on the table above 43% of the students choose option “sometime” and there are no students choose option “never”. It indicates that sometime students can deduce when the problem described.

TABLE 4.16**Item 16**

Ketika membaca sebuah topik/artikel, saya bisa memahami pokok masalahnya.

NO	Classification	Frequency	Percentage
1.	Always	8	22%
2.	Often	11	30%
3.	Sometime	15	42%
4.	Seldom	2	6%
5.	Never	0	-
	Total	36	100%

Based on the table above 42% of the students choose option “sometime” and there are no students choose option “never”. It indicates that sometime students can understand the point when reading a topic/article.

TABLE 4.17**Item 17**

Ketika menghadapi masalah, saya bisa menyelesaikannya.

NO	Classification	Frequency	Percentage
1.	Always	3	8%
2.	Often	14	39%
3.	Sometime	16	45%
4.	Seldom	3	8%
5.	Never	0	-
	Total	36	100%

Based on the table above 45% of the students choose option “sometime” and there are no students choose option “never”. It indicates that sometime students can solve their problems when the face it.

TABLE 4.18

Item 18

Ketika menghadapi masalah, saya bisa mengambil kesimpulan.

NO	Classification	Frequency	Percentage
1.	Always	9	25%
2.	Often	8	22%
3.	Sometime	14	39%
4.	Seldom	5	14%
5.	Never	0	-
	Total	36	100%

Based on the table above 39% of the students choose option “sometime” and there are no students choose option “never”. It indicates that sometime students can draw a conclusion when they faced a problems.

TABLE 4.19**Item 19**

Saya mampu mengungkapkan alasan dalam menarik kesimpulan.

NO	Classification	Frequency	Percentage
1.	Always	4	11%
2.	Often	11	31%
3.	Sometime	16	44%
4.	Seldom	5	14%
5.	Never	0	-
	Total	36	100%

Based on the table above 44% of the students choose option “sometime” and there are no students choose option “never”. It indicates that sometime students are able to reveal the reasons for drawing conclusions

TABLE 4.20**Item 20**

Ketika membaca sebuah topik/artikel, saya bisa memahami maksud dari penulis.

NO	Classification	Frequency	Percentage
1.	Always	4	11%
2.	Often	9	25%
3.	Sometime	17	47%
4.	Seldom	6	17%
5.	Never	0	-
	Total	36	100%

Based on the table above 47% of the students choose option “sometime” and there are no students choose option “never”. It indicates

that sometime when students are reading a topic/article, they can understand the intent of the author.

TABLE 4.21

Item 21

Saat menyelesaikan permasalahan, saya membaca informasi lebih dari satu kali.

NO	Classification	Frequency	Percentage
1.	Always	8	22%
2.	Often	13	37%
3.	Sometime	8	22%
4.	Seldom	4	11%
5.	Never	3	8%
	Total	36	100%

Based on the table above 37% of the students choose option “often” and 8% students choose option “never”. It indicates that most of the students read the information more than once when they solve the problem.

TABLE 4.22**Item 22**

Ketika menghadapi masalah, saya dapat mengungkapkan pemikiran saya mengenai masalah tersebut.

NO	Classification	Frequency	Percentage
1.	Always	7	19%
2.	Often	12	32%
3.	Sometime	15	41%
4.	Seldom	3	8%
5.	Never	0	-
	Total	36	100%

Based on the table above 41% of the students choose option “sometime” and there are no students choose option “never”. It indicates that sometime students can express their thoughts on the matter when faced the problems.

TABLE 4.23**Item 23**

Ketika menghadapi masalah, saya dapat mengeluarkan pendapat.

NO	Classification	Frequency	Percentage
1.	Always	6	17%
2.	Often	12	33%
3.	Sometime	15	42%
4.	Seldom	3	8%
5.	Never	0	-
	Total	36	100%

Based on the table above 42% of the students choose option “sometime” and there are no students choose option “never”. It indicates that sometime students can express their opinion when they faced the problem.

TABLE 4.24

Item 24

Saya bisa menjelaskan pemikiran saya mengenai suatu masalah secara meyakinkan.

NO	Classification	Frequency	Percentage
1.	Always	5	15%
2.	Often	8	23%
3.	Sometime	19	54%
4.	Seldom	3	8%
5.	Never	0	-
	Total	36	100%

Based on the table above 54% of the students choose option “sometime” and there are no students choose option “never”. It indicates that sometime students can explain their thinking about a problem conclusively.

TABLE 4.25**Item 25**

Saya bisa menjelaskan pemikiran saya mengenai suatu masalah secara logis/masuk akal.

NO	Classification	Frequency	Percentage
1.	Always	3	8%
2.	Often	11	30%
3.	Sometime	16	44%
4.	Seldom	5	15%
5.	Never	1	3%
	Total	36	100%

Based on the table above 44% of the students choose option “sometime” and 3% of the students choose option “never”. It indicates that sometime students can explain their thinking about a problem logically.

TABLE 4.26**Item 26**

Saya bisa memprediksi ide-ide yang dapat memecahkan masalah tersebut.

NO	Classification	Frequency	Percentage
1.	Always	3	8%
2.	Often	9	25%
3.	Sometime	18	50%
4.	Seldom	6	17%
5.	Never	0	-
	Total	36	100%

Based on the table above 50% of the students choose option “sometime” and there are no students choose option “never”. It indicates that sometime students can predict the ideas that can solve the problem.

TABLE 4.27

Item 27

Ketika menghadapi masalah, saya dapat berpikir dengan kritis.

NO	Classification	Frequency	Percentage
1.	Always	1	3%
2.	Often	11	30%
3.	Sometime	19	53%
4.	Seldom	5	14%
5.	Never	0	-
	Total	36	100%

Based on the table above 53% of the students choose option “sometime” and there are no students choose option “never”. It indicates that sometime students can think critically when they faced the problems.

TABLE 4.28

Item 28

Ketika menghadapi masalah, saya dapat berpikir dengan logis/masuk akal.

NO	Classification	Frequency	Percentage
1.	Always	3	8%
2.	Often	14	39%
3.	Sometime	14	39%
4.	Seldom	4	11%
5.	Never	1	3%
	Total	36	100%

Based on the table above 39% of the students choose option “often” and “sometime”, meanwhile 3% students choose option “never”. It indicates that some of the students can think logically when they face the problem.

TABLE 4.29

Item 29

Ketika menghadapi masalah, saya dapat berpikir secara mendalam.

NO	Classification	frequency	Percentage
1.	Always	8	22%
2.	Often	6	17%
3.	Sometime	16	44%
4.	Seldom	6	17%
5.	Never	0	-
	Total	36	100%

Based on the table above 44% of the students choose option “sometime” and there are no students choose option “never”. It indicates that sometime students can think deeply when they face the problem.

TABLE 4.30

Item 30

Ketika menghadapi masalah, saya dapat berpikir positif.

NO	Classification	Frequency	Percentage
1.	Always	7	19%
2.	Often	9	25%
3.	Sometime	12	33%
4.	Seldom	5	15%
5.	Never	3	8%
	Total	36	100%

Based on the table above 33% of the students choose option “sometime” and 8% of the students choose option “never”. It indicates that sometime students can think positively when they face the problems.

Table 4.31
Students’ Critical thinking

No	Options									
	Always		Often		Sometime		Seldom		Never	
	F	P	F	P	F	P	F	P	F	P
1.	3	8%	7	20%	26	72%	-	-	-	-
2.	5	14%	6	17%	11	30%	10	28%	4	11%
3.	4	11%	11	30%	9	53%	2	6%	-	-
4.	2	6%	13	36%	14	39%	7	19%	-	-
5.	3	8%	6	17%	17	48%	7	19%	3	8%
6.	7	19%	13	36%	15	42%	1	3%	-	-
7.	10	28%	6	17%	15	41%	4	11%	1	3%
8.	13	36%	8	2%	9	25%	5	14%	1	3%
9.	3	8%	12	33%	12	33%	8	23%	1	3%
10.	5	14%	19	53%	8	22%	3	8%	1	3%
11.	9	25%	11	31%	12	33%	4	11%	-	-
12.	7	19%	12	33%	11	31%	6	17%	-	-
13.	3	8%	16	45%	13	36%	4	11%	-	-
14.	2	6%	11	30%	14	39%	8	22%	1	3%

15.	6	16%	11	30%	16	43%	4	11%	-	-
16.	8	22%	11	30%	15	42%	2	6%	-	-
17.	3	8%	14	39%	16	45%	3	8%	-	-
18.	9	25%	8	22%	14	39%	5	14%	-	-
19.	4	11%	11	31%	16	44%	5	14%	-	-
20.	4	11%	9	25%	17	47%	6	17%	-	-
21.	8	22%	13	37%	8	22%	4	11%	3	8%
22.	7	1%	12	32%	15	41%	3	8%	-	-
23.	6	1%	12	33%	15	42%	3	8%	-	-
24.	5	1%	8	23%	19	54%	3	8%	-	-
25.	3	8%	11	30%	16	44%	5	15%	1	3%
26.	3	8%	9	25%	18	50%	6	17%	-	-
27.	1	3%	11	30%	19	53%	5	14%	-	-
28.	3	8%	14	39%	14	39%	4	11%	1	3%
29.	8	22%	6	17%	16	44%	6	17%	-	-
30.	7	19%	9	25%	12	33%	5	15%	1	3%
Total score	161		320		432		138		18	

From the table above, it described that option “always” has 161 frequencies. The option “often” has 320 frequencies. The option “sometimes” has 432 frequencies. The option “seldom” has 138 frequencies. The option “never” has 18 frequencies.

2. The Result of Vocabulary Mastery Test

After the vocabulary size answer sheets were collected, it gave the scores to the students' answer. The following table shows about the vocabulary mastery test scores.

Table 4.32

The Result of Vocabulary Mastery Test Score

CODE	VOCABULARY MASTERY (Y)	Y²
A1	80	6400
A2	84	7056
A3	80	6400
A4	98	9604
A5	90	8100
A6	56	3136
A7	70	4900
A8	50	2500
A9	90	8100
A10	70	4900
A11	80	6400
A12	88	7744
A13	50	2500
A14	78	6084
A15	48	2304
A16	38	1444
A17	86	7396
A18	58	3364
A19	56	3136

A20	72	5184
A21	64	4096
A22	70	4900
A23	70	4900
A24	60	3600
A25	70	4900
A26	96	9216
A27	74	5476
A28	72	5184
A29	56	3136
A30	62	3844
A31	74	5476
A32	64	4096
A33	86	7396
A34	70	4900
A35	60	3600
A36	68	4624
Sum	2538	185996
Lowest Score	38	
Highest Score	98	
Mean	70.5	
Standard Deviation	14.21	

Based on the calculation variable Y was found $\sum Y = 2538$ and $\sum Y^2 = 185996$. Based on the data above, it is known that the highest score was 98 and the lowest score was 38. The classification of the students' scores can be seen in the table below .

Table 4.33
Distribution of Students' Vocabulary Mastery Test Score

No .	Category	Frequency
1	Score 80 – 100	14
2	Score $70 \leq 80$	4
3	Score $60 \leq 70$	5
4	Score $50 \leq 60$	9
5	Score <50	4
	Total	36

(Teguh, 2013)

Based on the data above, it can be seen the variation of scores. Based on the calculation there were fourteen students who acquired score 80 – 100, four students who acquired score $70 \leq 80$, five students who acquired score $60 \leq 70$, nine students who acquired score $50 \leq 60$ and four students who acquired score < 50 .

Table 4.34
Distribution Frequency and Presentation Score of the Students' Vocabulary
Mastery Test

No	Category	Predicate	Letter Value	Frequency	Percentage
1	Score 80 – 100	Very good	A	14	38.89%
2	Score $70 \leq 80$	Good	B	4	11.11%
3	Score $60 \leq 70$	Fair	C	5	13.89%
4	Score $50 \leq 60$	Poor	D	9	25%
5	Score < 50	Bad	E	4	11.11%
	Total			36	100%

Based on the data above, it can be explained that there were 38.89% students who acquired scores 80-100, 11.11% students who acquired score $70 \leq 80$, 13.89% students who acquired score $60 \leq 70$, 25% students who acquired score $50 \leq 60$ and there were 11.11% students who acquired score < 50 .

B. Research Finding

1. The analysis of students critical thinking

The first step in getting qualitative analysis result is by collecting and classifying each item of questionnaire based on each option multiplied them by standard score which have been determined before.

Analyzing the total percentage of the students' level in critical thinking is based on the indicators of questionnaires. It can be seen as follows:

a Interpretation

F : 487; N : 164

$$P = \frac{F}{N} \times 100 : 5$$

$$P = \frac{487}{164} \times 100 : 5$$

$$P = 59.39 \%$$

b Analysis

F : 645; N : 180

$$P = \frac{F}{N} \times 100 : 5$$

$$P = \frac{645}{180} \times 100 : 5$$

$$P = 71.66 \%$$

c Evaluation

F : 630; N : 181

$$P = \frac{F}{N} \times 100 : 5$$

$$P = \frac{630}{181} \times 100 : 5$$

$$P = 20.70 \%$$

d Inference

F : 628; N : 180

$$P = \frac{F}{N} \times 100 : 5$$

$$P = \frac{628}{180} \times 100 : 5$$

$$P = 69.77 \%$$

e Explanation

F : 628; N : 180

$$P = \frac{F}{N} \times 100 : 5$$

$$P = \frac{628}{180} \times 100 : 5$$

$$P = 69.77 \%$$

f Self-regulatory

F : 597; N : 178

$$P = \frac{F}{N} \times 100 : 5$$

$$P = \frac{597}{178} \times 100 : 5$$

$$P = 67.07 \%$$

Based on the calculation above, it can be seen that the highest percentage is indicator “Analysis” 71.66%. According to Dwi & Ermayanti, it means that the level of the students’ critical thinking in “Analysis” is categorized “Good “. It found in the level of percentage (61 - 80).

Table 4.35
The Students’ Critical Thinking and Their Vocabulary Mastery Test Score

No	Student’s name	Questionnaire result (X)	Vocabulary score (Y)
1.	A1	83	80
2.	A2	70	84
3.	A3	66	80
4.	A4	75	98
5.	A5	84	90
6.	A6	60	56
7.	A7	78	70
8.	A8	56	50
9.	A9	67	90
10.	A10	70	70
11.	A11	66	80
12.	A12	50	88

13.	A13	65	50
14.	A14	93	78
15.	A15	73	48
16.	A16	60	38
17.	A17	71	86
18.	A18	56	58
19.	A19	62	56
20.	A20	68	72
21.	A21	69	64
22.	A22	67	70
23.	A23	63	70
24.	A24	41	60
25.	A25	65	70
26.	A26	77	96
27.	A27	84	74
28.	A28	80	72
29.	A29	68	56
30.	A30	62	62
31.	A31	84	74
32.	A32	78	64
33.	A33	72	86
34.	A34	67	70
35.	A35	47	60
36.	A36	55	68
	Total	$\Sigma X = 2452$	$\Sigma Y = 2538$

2. The Correlation between Students' Critical Thinking and Students' Vocabulary Mastery

In this case, both the students' critical thinking and vocabulary mastery are related by using Pearson Product moment formula. The data are described on the following table:

Table 4.36
The Correlation between Students' Critical Thinking and Vocabulary Mastery

No.	X	Y	XY	X ²	Y ²
1.	83	80	6640	6889	6400
2.	70	84	5880	4900	7056
3.	66	80	5280	4356	6400
4.	75	98	7350	5652	9604
5.	84	90	7560	7056	8100
6.	60	56	3360	3600	3136
7.	78	70	5460	6084	4900
8.	56	50	2800	3136	2500
9.	67	90	6030	4489	8100
10.	70	70	4900	4900	4900
11.	66	80	5280	4356	6400
12.	50	88	4400	2500	7744
13.	65	50	3250	4225	2500
14.	93	78	7254	8649	6084
15.	73	48	3504	5329	2304

16.	60	38	2280	3600	1444
17.	71	86	6106	5041	7396
18.	56	58	3248	3136	3364
19.	62	56	3472	3844	3136
20.	68	72	4896	4624	5184
21.	69	64	4416	4761	4096
22.	67	70	4690	4489	4900
23.	63	70	4410	3969	4900
24.	41	60	2460	1681	3600
25.	65	70	4550	4225	4900
26.	77	96	7392	5929	9216
27.	84	74	6216	7056	5476
28.	80	72	5760	6400	5184
29.	68	56	3808	4624	3136
30.	62	62	3844	3844	3844
31.	84	74	6216	7056	5476
32.	78	64	4992	6084	4096
33.	72	86	6192	5184	7396
34.	67	70	4690	4489	4900
35.	47	60	2820	2209	3600
36.	55	68	3740	3025	4624
	$\sum X =$ 2452	$\sum Y =$ 2538	$\sum XY =$ 175146	$\sum X^2 =$ 171391	$\sum Y^2 =$ 185996

From the calculation of variable X and Y, It was known that:

$$\begin{aligned}\Sigma X &= 2452 & \Sigma X^2 &= 171391 \\ \Sigma Y &= 2538 & \Sigma Y^2 &= 185996 \\ \Sigma XY &= 175146\end{aligned}$$

Based on the calculation of correlation between variable X and variable Y above, it can be known of each variable. Based on the product moment will be

found the product of r_{xy} , as follow:

$$\begin{aligned}r_{xy} &= \frac{N\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{N\Sigma X^2 - (\Sigma X)^2\}\{N\Sigma Y^2 - (\Sigma Y)^2\}}} \\ r_{xy} &= \frac{36 \times 175146 - (2452)(2538)}{\sqrt{\{36 \times 171391 - (2452)^2\}\{36 \times 185996 - (2538)^2\}}} \\ r_{xy} &= \frac{6305256 - 6223176}{\sqrt{(6170076 - 6012304)(6695856 - 6441444)}} \\ r_{xy} &= \frac{82080}{\sqrt{(157772)(254412)}} \\ r_{xy} &= \frac{82080}{\sqrt{40139090064}} \\ r_{xy} &= \frac{82080}{200347.4234} \\ r_{xy} &= 0.411\end{aligned}$$

Based on the manual calculation above, it was found that the r_{value} was 0.411. Then the r_{value} was consulted with the table of the interpretation coefficient correlation r as follows :

TABLE 4.37
Coefficient Correlation Interpretation

Interval	Category
0.00 – 0.199	Very poor
0.20 – 0.399	Poor
0.40 – 0.599	Fair
0.60 – 0.799	High
0.80 – 1.00	Very high

(Teguh, 2013, p.22)

From the table of the interpretation coefficient correlation above, it can be seen that the r_{value} (0.411) was at the level “fair” correlation. So it meant that the correlation between students’ critical thinking and vocabulary mastery of the sample class was in fair correlation. The result of the calculation that was counted by product moment above showed that the index of correlation was 0.411. Then, the degree of freedom with formula, as follow :

$$df = N - nr$$

$$\text{it was known : } N = 36, nr = 2$$

$$df = 36 - 2$$

$$= 34$$

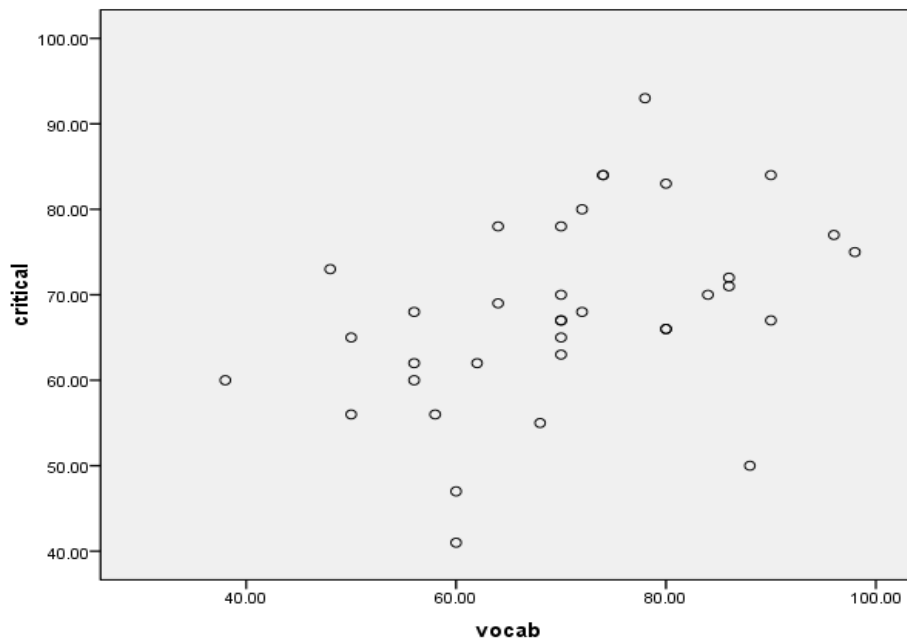


Figure 4.1
scatterplot

And then to know the contribution of the variable X to the variable Y is used the formula as below:

$$KP = r^2 \times 100 \%$$

Where:

KP : determinant coefficient score

r : correlation coefficient score

$$KP = r^2 \times 100 \%$$

$$KP = 0.411^2 \times 100 \%$$

$$KP = 0.168921 \times 100 \%$$

$$KP = 16.8921 \%$$

So, it means that the variable X (students' critical thinking) gives the contribution to the vocabulary mastery for the Students at SMA Negeri 3 Palangka Raya on Academic years 2017/2018 was 16.8921 % and 83.1079 % is influenced by the other aspects.

To know the value of t_{value} is used the formula:

$$t_{value} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

Where:

t_{value} : nilai t (value t)

r : the score of coefficient correlation and

n : the number of sample.

So that by the formula above it was known that:

$$r = 0.411$$

$$n = 36$$

$$t_{value} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

$$t_{value} = \frac{0.411\sqrt{36-2}}{\sqrt{1-0.411^2}}$$

$$t_{value} = \frac{2.396521228}{0.9116353438}$$

$$t_{value} = 2.628$$

Based on the calculation above, $\alpha = 0.05$ and $n = 36$ so, $df = n - 2 = 36 - 2 = 34$ and t_{table} was 1.690. So, it can be seen than $t_{value} \geq t_{table}$ ($2.628 \geq 1.690$), so that the result was the H_a is accepted and H_o is refused. In this

case that variable X students' critical thinking have fairrelationship or gave influence to students' vocabulary mastery.

3. Testing Hypothesis using SPSS Program

The researcher applied SPSS 16 program to calculate the Pearson Product Moment correlation in testing hypothesis of the study which the result also supported the result of manual calculation. The result of the test using SPSS 16.0 Program can be see as follow:

Table 4.38
The calculation of Pearson Product Moment correlation using SPSS 16.0 Program

Correlations		critical thinking	vocabulary mastery
critical thinking	Pearson Correlation	1	.411*
	Sig. (2-tailed)		.013
	N	36	36
vocabulary mastery	Pearson Correlation	.411*	1
	Sig. (2-tailed)	.013	
	N	36	36

*. Correlation is significant at the 0.05 level (2 tailed).

The table showed the result of calculation using SPSS 16 program. From the table above, it meant that H_a was accepted.

C. Discussion

From the description of the data, it indicates that there was positive correlation between students' critical thinking and their vocabulary mastery. The score of correlation coefficient obtained is 0.411 which is in the interval of 0.40 – 0.599. Thus, the relationship is categorized into fair. Hypothesis alternative is accepted and hypothesis null is rejected. Students' critical thinking gives the contribution to the vocabulary mastery for the Students at SMA Negeri 3 Palangka Raya on Academic years 2017/2018 was 16.892 %.

The findings of the study indicated that alternative hypothesis stating that there is a positive correlation between students' critical thinking and vocabulary mastery of the tenth grade students at SMAN 3 Palangka Raya was accepted and the null hypothesis stating that there is no a significant positive correlation between students' critical thinking and vocabulary mastery of the tenth grade students at SMAN 3 Palangka Raya was rejected. It meant that do the higher critical thinking the student have, the better they mastering vocabulary. The r_{value} was 0.411, it was interpreted as fair correlation, so there was a fair correlation between the students' critical thinking and vocabulary mastery.

These findings were suitable with the theories as stated that: first, critical thinking ability of learners correlated positively and significantly with their L2 vocabulary knowledge (Chap. II, p. 21). Second, critical thinking had significant effect on the participants' comprehension of text with learning

unfamiliar vocabulary items (Chap. II, p. 20). Third, there is a significant relationship between critical thinking and lexical inferencing (Chap. II, p. 20).

Students who have high critical thinking was possible got active in mastering vocabulary. But, many aspects that made student have good critical thinking for example student can start their critical thinking with a task, like weaving or sewing (Chap. II, p. 14). In this case critical thinking requires; flexibility, a clear purpose, organization, time and effort, asking questions and finding answer, research, coming to logical conclusion (Chap. II, p. 11).

Related to the theories above, the researcher concluded that critical thinking plays a role in improving their vocabulary mastery. Students who have good critical thinking will think about the importance of vocabulary mastery in learning English as foreign language, so they will learn and improve their vocabulary mastery, as Ku (2009) in Mansoor & Ali argues that critical thinking equips students with the competency necessary to deal quickly and effectively with everaccelerating changes of the new world, to develop such competency, students must go beyond textbook-knowledge absorption and learn to build up flexible intellectual skills involved in learning vocabulary (Chap. II, p. 20).

CHAPTER V

CONCLUSION AND SUGGESTION

This chapter discusses the conclusion and suggestion of the research. The researcher explains the conclusion of the research and the suggestion for the next researcher.

A. Conclusion

According to the description of the data that mentioned in the previous chapter, it showed that the students' score in critical thinking and the students' vocabulary test score are vary. Based on the total calculation of variable X (students' critical thinking) and variable Y (vocabulary mastery) was fair positive correlation. It means that between students' critical thinking and vocabulary mastery has the mediocre correlation. The result of r_{xy} was 0.411. It showed that Alternative Hypothesis (H_a) was received and null hypothesis (H_o) was refused. So, between two variable has a positive significant correlation.

The calculation above, $\alpha = 0.05$, $df = 34$ and t_{table} was 1.690. So, it can be seen than $t_{value} \geq t_{table}$ ($2.628 \geq 1.690$), so that the result was H_a is accepted and H_o is refused. In this case that students' critical thinking have fair relationship or gave influence to students' vocabulary mastery.

B. Suggestion

At the end of this paper, the researcher would like to offer some suggestions, for the teacher and the learner, also recommendation for further research :

1. The English teachers are expected to motivate their students to increase their critical thinking and give motivate to increase their vocabulary mastery.
2. Make the atmosphere of the class more conducive in order to make the teaching-learning process more a live, full of fun for all students.
3. For students, they are expected to realize that vocabulary is the most important element in learning a language including English. So, they can motivate themselves to enrich their vocabulary by applying their critical thinking skill to look for the right ways in learning vocabulary mastery. So, they will be faster and easier to learning English.
4. For the next researcher, deeper analysis about students' critical thinking. Looking for things that can giving good affect in students, critical thinking skill and find the influence of each to the vocabulary mastery. The further researcher recommended constructing the appropriate, use various aspects of vocabulary mastery test and use various test not only questionnaire and test but also interview.

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