

**THE CORRELATION BETWEEN CRITICAL THINKING
AND READING COMPREHENSION ACHIEVEMENT OF
ENGLISH EDUCATION STUDY PROGRAM STUDENTS' OF
UIN RADEN FATAH PALEMBANG**



UNDERGRADUATE THESIS

**This thesis was accepted as one of the requirement to get
the title of Sarjana Pendidikan (S.Pd.)**

by

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Setelah kami periksa dan diadakan perbaikan-perbaikan seperlunya, maka skripsi yang berjudul "THE CORRELATION BETWEEN CRITICAL THINKING AND READING COMPREHENSION OF THE ENGLISH EDUCATION STUDY PROGRAM STUDENTS OF UIN RADEN FATAH PALEMBANG", ditulis oleh saudara Hady Maresyah Putra (13250030) telah dapat diajukan dalam sidang Munaqasah Fakultas Tarbiyah dan Keguruan UIN Raden Fatah Palembang. Demikianlah terimakasih.

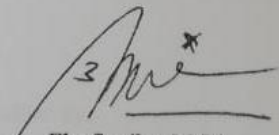
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PROGRAM STUDENT'S OF UIN RADEN FATAH PALEMBANG**

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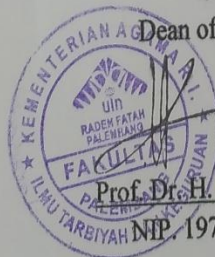
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1. All the data information, interpretation, and conclusions presented in this thesis, except for those indicated by the sources, are the results of my observation, process, and thought with guidance of my advisors.
2. The thesis that i wrote is original and never been handed in for another academic degree, neither at UIN Raden Fatah Palembang nor other universities.

This statement is made truthfully and if one day, there is evidence of forgery in the statement above, I am writing to accept the academic sanction of the cancellation my undergraduate degree that i have recieved though this thesis.

Palembang, November 24, 2017

The Writer



Hady Maresyah Putra

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Dedication

This paper is dedicated to all people who always pray and give support in finishing this undergraduate thesis for my success, they are:

- 1. My beloved father (Mr. M. Rudi) and my mother (Mrs. Rosmawati) who always has honesty sincerity to grow me up, educate, accompany and pray for me until getting success and their greatest love and support for me at all until I can accomplish this undergraduate thesis.*
- 2. My brother (Herlambang A. M) and for someone who always support me too much. Due to the support and big love, I can finish my undergraduate thesis well.*

Motto

“Never give up on something you really want. It’s difficult to wait, but more difficult to regret,” – Hady Maresyah Putra

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The writer would like to address his gratitude to my first and second advisor, *Hj.Renny Kurniasari, M.Pd* and *Eka Sartika, M.Pd* for their patient, guidance, kindness, valuable advice, and correction during the development of this research paper. I also dedicate this research paper to my beloved parents, and my partner who always gave me their endless supports and encouragements so that I could finish this research paper.

Finally, the writer realizes that this research paper still has some weakness and shortage. Thus, she would be grateful to accept any suggestions and corrections from anyone for better writing.

Palembang, November 2017

Hady Maresyah Putra

ABSTRACT

Theoretically, critical thinking influences the reading comprehension of students. Therefore, the aims of the study were to find out whether critical thinking had any significant correlation to reading comprehension of English Education Study Program Students at UIN Raden Fatah Palembang; and whether it influenced their reading comprehension. The study was in the form of correlational research method. The population of the study was 636 active EFL students. By using purposive sampling technique, there were 108 students involved as participants in this research. The data were obtained by using two instruments which were critical thinking test and reading comprehension test. To answer the first problem, Pearson Product Moment Correlation Coefficient was used. From the data analysis, it was found that there was no significant correlation between students' critical thinking and their reading comprehension since the p-value was (.20) greater than significance value (.20 > .005). As the result, the second and the third problem were eliminated. In short, critical thinking did not have any relation to reading comprehension of English Education Study Program students of UIN Raden Fatah Palembang.

Keywords: Reading interest, reading comprehension achievement, EFL students.

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CHAPTER I

INTRODUCTION

This chapter presents (1) background, (2) problems of the study, (3) objectives of the study, and (4) significance of the study.

1.1Background

English becomes very important nowadays because English has already been one of the most important language (Carrel, 1998; Graddol, 2000; Crystal, 2003; Eskey, 2005; Powers, 2010; Siriyothin, 2011). They know that by mastering English either actively or passively, they can dominate half of this world, not only in business world but also in politics and education. It is also supported by our government which is aware how important English is.

It has been announced that English in Indonesia, as one of the subject, is taught from playgroup until the university (KTSP, 2006). In English, there are four language skills, listening, speaking, reading, and writing that should be mastered by the students in order to use English actively or passively.

Among four language skills that should be mastered by the students, is reading. Reading should be the first skill that should be learnt by the students because reading is an active cognitive process of interaction with printed and monitoring comprehension to establish meaning (Bromley, 1992). The students, hopefully, comprehend the texts they read to get the information. According to Guthrie, Hoa, Wigfield, Tonks, Humenick, and Little (2007, p. 283), one of the aims is to teach students how to comprehend different text genres when students are expected to read a wide range of material to gain knowledge and literary

experience. Due to English as a foreign language, reading is not only the process of acquiring information but also improving the ability of learning as stated by Essberger (2002, p.1) in Kurniawati (2010, p.1) there are various good reasons for teaching reading. Students may actual need to read for their work or study, or they want to read for pleasure. In addition, the exposure to English is an important part of acquiring language, the text themselves can act as models for writing, the exercise, allows, the study and practice of grammar, vocabulary, pronunciation, punctuation, and provoke conversation and discussion.

There is a fact from Program for International Students Assessment (PISA) report in 2012, it shows that among 65 countries participated in that program, Indonesia is at the 64th with the average score 402, which is significantly below the average score of OECD, 493 (Organization for Economic Cooperation and Development [OECD], 2010). Furthermore, The Progress in International Reading Literacy Study (PIRLS) in 2011, which measures students' performance on a combined reading literacy scale, also reported that Indonesia ranked 42 out of 45 countries around the world (International Association for the Evaluation of Educational Achievement [IEA], 2012). Indonesian students were just capable of mastering 305 reading material, and found difficulty in reading items that were in the form of commentary requiring cognitive process. In line with this, according to EGRA (2014, p. 17), reading achievement of students in Indonesia was on the lowest category and 26.3% of them was reading with comprehension. Moreover, Sudarmi (2008 p. 20) found that 43,33% of students in Palembang were on below average of critical thinking.

People usually read the text to find the message or information. Whether or not they can understand about the text they read, it depends on their reading comprehension ability. According to Kosanovich (2013), reading comprehension as the process of simultaneously extracting and involvement with written language is very important since it supports student's academic performance. Students think and try to comprehend the reading text when they read. This means, thinking skill cannot be separated from reading comprehension. In line with this, NIHCD (2002) states that comprehension is the process of deriving meaning from connected text. It involves world knowledge (vocabulary) as well as thinking reasoning. Additionally, Mohammadi, Heidary, and Nirya (2012) state that one factor that may influence students' reading comprehension is critical thinking.

John Dewey, the 'father' of the modern critical thinking tradition, called it 'reflective thinking'. Dewey (as cited in King, Wood & Mines, 1990) argues that reflective thinking, the careful collection and evaluation of evidence leading to a conclusion, should be a central aim of education. Many researchers such as Vaseghi, Gholami & Barjesteh (2012, p. 404) also support that "critical thinking plays a central role in academic instruction because it is what students need to succeed both in an academic environment and real-life situations." Data shown by research conducted in the scope of critical thinking endorse that this skill is very essential in education and real life. A study conducted by Forood and Farahani (2013) showed that high critical thinkers performed better than low critical thinkers in answering factual, referential, and inferential reading comprehension

questions. Besides, successful students are not defined as those who are able to memorize facts and learn fixed routines and procedures, instead as those who are able to think critically when they are in difficulties and about what they are learning (Chaffee, 1992). Ennis (1993) supports that thinking critically covers the skills of analysis, synthesis, and evaluation which are the purposes of education in the level of cognitive in Bloom's taxonomy. In addition, it is related to the abilities of problem-solving and decision making. Therefore, teacher should teach the students not only what to think but also how to think critically.

Additionally, the study by Forood & Farahani (2013) found that there was any significant difference between the performance of high and low critical thinkers on factual, referential, and inferential reading comprehension questions. The study conducted by Hosseini (2012) also investigated the relationship of critical thinking ability, reading comprehension and reading strategy among 70 male and female Iranian university students majoring in English Translation and English Literature. The study showed that there was a correlation between critical thinking ability, reading comprehension and reading strategy.

Based on the informal interview with the undergraduate EFL students of UIN Raden Fatah who had taken all the reading courses, it was found that some of them were not satisfied with their reading score. Some students of English Education Study Program said that they had difficulties in comprehending the longer text. The students were sometimes lazy to think because they had to assess and judge the rationality of an idea from the reading text given by the lecturer. In addition, sometimes they got bored in doing this activity.

According to the statements above, the writer is interested in conducting the study at English Education Study Program of UIN Raden Fatah Palembang because of some reasons. At English Education Study Program of UIN Raden Fatah Palembang, reading is one of the subjects that the students have to enroll. The total credit points of Reading courses at the English Education Study Program, PBI UIN Raden Fatah are 10 credit points. It shows that reading has a big portion in students' learning of English. As a matter of fact, the students have to deal with reading not only in reading subjects, but they also do reading to support their courses, too. Since all courses surely provide a number of texts to read and understand, the students should have good reading comprehension and critical thinking skill. Taking into consideration what literature has documented concerning the role of reading comprehension, and critical thinking, the writer is interested in conducting a study about the correlation and the influence of students' critical thinking toward reading comprehension.

1.2 Problems of the Study

- 1) Was there any significant correlation between students' critical thinking and reading comprehension achievement?
- 2) Did students' critical thinking give influence reading comprehension achievement?

1.3 Objectives of the Study

In this study, the writer will try to find out:

- 1) Whether or not there was any correlation between students' critical thinking and reading comprehension.
- 2) Whether or not student's critical thinking gave influence reading comprehension achievement.

1.4 Significance of the Study

This study will be valuable for other researchers, lecturers and teachers, and also students. The result of the study may give contribution to other researcher as the basis for further research. Lecturers and teachers will gain more insight on the importance of critical thinking to be integrated and reading interest to be stimulated in learning proces. It is also expected that students become more aware to use critical thinking not only in reading comprehension but also in other aspects to be more successful in academic life. For the students, it is hoped that students will know how to think rather than what to think, and also they can have the ability to monitor and assess their thinking while processing the thinking of others, and when they read, the reflective mind monitorshow it is reading while it is reading. Thefoundation for this ability is the knowledge for them of howtheir mind operates when reading well.

CHAPTER II

LITERATURE REVIEW

This chapter presents: (1) correlational research, (2) the concept of reading, (3) the process of reading, (4) reading comprehension, (5) factors affecting reading comprehension (6) critical thinking, (7) characteristics of critical thinking, (8) benefits of critical thinking, (9) kinds of critical thinking, (10) critical thinking and reading comprehension, (11) previous related studies, (12) research setting, (13) hypotheses of the study, and (14) criteria for testing hypotheses.

2.1 Correlational Research

Johnson and Christensen (2012, p. 44) state that in correlational research, the researcher studies the relationship between one or more quantitative independent variables and one or more quantitative dependent variables. There is correlation coefficient, which is a numerical index that provides information about the strength and direction of the relationship between two variables. It provides information how variables are associated. More specifically correlation coefficient is a number that can range from -1 to 1, with zero standing for no correlation at all. If the number is greater than zero, there is a positive correlation. If the number is less than zero, there is a negative correlation. If the number is equal to zero, there is no correlation between the two variables. If the number is equal to +1.00 or equal to -1.00, the correlation is called perfect. Positive correlation is present when scores on two variables tend to move in the same direction while negative correlation is present when score on two variables tend to move in opposite direction – as one variable goes up, the other tends to go down, and vice versa.

The meaning of a given correlation coefficient can be seen below based on Johnson and Christensen (2012, p. 340):

Table 1. Correlation Coefficient

Interval Coefficient	Level of Correlation
0.00 – 0.34	Very Weak
0.34 – 0.40	Weak
0.41 – 0.64	Fair
0.65 – 0.84	Strong
0.85 – 1.00	Very Strong

There are two primary types of correlational research design; explanation and prediction (Creswell, 2005, p. 326). The explanatory research design is a correlational design in which the researcher is interested in the extent to which two variables (more) co-vary, that is, where changes in one variable are reflected in changes in the other. Explanatory design consists of a simple association between two variables or more than two. Creswell (2005, p. 327) shows that the characteristics of this design are that the researchers correlate two or more variables, collect data at one point in time, analyze all participants as a single group, obtain at least two scores for each individual in the group—one for each variable, report the use of the correlation statistical test (or an extension of it) in the data analysis, and make interpretations or draw conclusions from the statistical test results.

Johnson and Christensen (2012, p. 339) add that in an explanatory study, all the data on both variables will usually be collected within a fairly short time. Often, the instruments used are administered in a single session, or in two sessions—one immediately after the other.

In a prediction design, researcher seeks to anticipate outcomes by using certain variables as predictors. This design is useful because it helps anticipate or forecast future behavior. The purpose of this design is to identify variables that will positively predict an outcome or criterion. In this form of research, the investigator identifies one or more predictor variables and a criterion (or outcome) variable. A predictor variable is the variable used to make a forecast about an outcome in correlational research while criterion variable is the outcome being predicted. Creswell (2005, p. 328) shows that the characteristics of this design are that the researchers typically include the word “prediction” in the title or research questions, measure the predictor variable(s) at one point in time and the criterion variable at a later point in time, and forecast future performance.

In addition, the minimum acceptable sample size for a correlational study is considered by most researchers to be no less than 30 (Fraenkel, Wallen & Hyun, 2012 p. 338; and Creswell, 2005, p. 150).

2.2 The Concept of Reading

Reading is an activity that can give someone know the process of uniting a word in a sentence. According to Hidayat and Aisah (2013, p. 102), reading is a catch process or to obtain a meant concepts by writer, to interpretation, evaluate, writer concepts and reflect or make action like meant in that concepts. They also

mention that reading is a process to know a word and to unite a word mean in a sentence and reading structure.

Reading is regarded as one of English skills that need reader's interpretation from the text. In regarding with Nuttal (2005), reading essentially focuses on meaning, especially delivering meaning from writer to reader. Williams (1996) states reading as 'a process' through which one looks at and understands a written text. It means that reading activity builds thinking collaboratively among the reader, the writer, and the text. Zaelman, Daniels, and Hyde (2004 p. 320) define reading as a transaction between words of an author and the mind of a reader, during which meaning is constructed. Those explanations above showed that reading activity makes the reader's mind active to get the gist from the text.

Students should enable themselves to enter the world of the text without seeking the help from the traditional teaching method of comprehension checks. Instead they could be more actively engaged in negotiation for potential meaning, both individually and with other students. Interest in the activity can sustain interest in the text or be fuelled by interest in the text (Greenwood, 1998 p. 89).

Urquhart and Weir (1998 p. 18) argue that reading is a language activity, and it involves, at some time or another, inferencing memory, relating text to background knowledge, as well as decoding and obvious language aspects as syntax and lexical knowledge. Dechant (1969 p. 335) believes that a 'complete reading' involves four steps: recognition of the written symbols, understanding the meaning or message of the text, reaction of the reader after completing reading

and integration of the whole process. It can be concluded that reading is an intentional process of learning to gain information, to enhance vocabulary as well as to construct the meaning from written text or printed text.

2.3 The Process of Reading

There are at least three types of constructing meaning processes proposed by some experts. The three processes of constructing meaning of the text are presented below.

a. Bottom-up processing

Bottom-up processing views the process of reading as phonemic units. In bottom-up processing, the reader must recognize a multiplicity of linguistic signal such as letters, morphemes, syllables, words, phrases, grammatical cues, and discourse markers (Brown, 2001 p. 299). It means that the reader has to scan from letters to letters, recognize the words from one to another, associate among phrases, clauses, and sentences, and finally it is processed into phonemic units representing lexical meaning and attains some comprehension of the text.

b. Top-down processing

In top-down processing, the reader involves their knowledge of syntax and semantic to create meaning of the text (Goodman, 2007 p. 37). The reader constructs meaning by bringing their early thought to the text being read. It means that the reader's background knowledge is very important in getting the meaning of the text. In top-down processing, the reader makes some prediction of the text. The process is continued by taking samples which will be confirmed or not to the predictions have been made before. Finally, the reader checks the predictions.

c. Interactive processing

Interactive processing is a combination of top-down and bottom-up processing. In interactive processes, the reader predicts the probable meaning of the text, then moving to the bottom-up processes to check whether that is really what the writer says (Nuttal, 2001 p. 299). It means that the reader both recognizes words and predicts the implied information in constructing meaning of the text.

From the discussion above, it can be concluded that there are three types in the process of reading. They are bottom-up processing, top-down processing, and interactive processing. Bottom-up processing deals with word recognition. Top-down processing deals with the readers' background knowledge. The last, interactive processing combines the top-down and bottom-up processing. Here, interactive processing combines word recognition and background knowledge of the readers. The three processes help the readers to comprehend the text they read.

2.4 Reading Comprehension

Reading is not only reading something useless. When someone reads a text to get some information through textbooks, articles or essays, magazines, etc., they need to interpret or understand the text. Richards et al. (1993, p.306) defines reading is perceiving a written text in order to understand its contents. Furthermore, Khairuddin (2013, p.162) states that reading is a skill that must be learned, yet the process of learning to read can become pleasurable and easy for some students or displeasing and complicated for others.

Reading is an activity that can give someone know the process of uniting a word in a sentence. According to Hidayat and Aisah (2013, p.102), reading is a catch process or to obtain a meant concepts by writer, to interpretation, evaluate, writer concepts and reflect or make action like meant in that concepts. They also mention that reading is a process to know a word and to unite a word mean in a sentence and reading structure.

By reading something, someone need to understand or comprehend the whole text. Comprehension is seen as the skill to understand a something and can be said as the cognitive process as well. According to Cooper and Lewy(1988, p.27) as cited in Kurniawati (2010, p.14), comprehension is a process of constructing meaning from clues in the text and information in the reader's background of experience, this process of building meaning involves interaction between the reader and the context. Hornby (2010, p.296) states that comprehension is the ability to understand and an exercise that trains students to understand a language. Magliano, Durik and Holt (2011, p.5) define comprehension arises from a series of cognitive processes-including word decoding, lexical access, syntactic processing, inference generation, reading strategies (e.g., self-explanation), and postreading process (e.g., summarization, question asking and answering, argumentation)-that support the construction of a coherent mental representation that reflects the meaning of a text.It can be concluded that reading and comprehension have a relationship. Reading has an effect of comprehension and comprehension has an effect of reading. Guthrie, J. R., Wigfield, A., Barbosa, P., Perenvich, K. C., Taboada, A., Davis, M. H.,

Scaffidi, N. T., and Tonks, S (2004, p.403) state that reading comprehension is rightly directed toward identifying classroom practices with known effect on specific aspects of reading.

2.5 Factors Affecting Reading Comprehension

There are many ideas of the factors affecting reading comprehension proposed by some experts. Below four factors affecting reading comprehension are presented.

a. Background knowledge of the text

Students' background knowledge of the text is one of the factors affecting reading comprehension. Readers understand what they read because they are able to take the stimulus beyond the graphic representation and assign it membership to an appropriate group of concepts already stored in their memories. Here, the students' background knowledge is important since the students start to make connections about what they already know in order to construct meaning (Alderson, 2000 p. 32; Brown, 2001 p. 299).

b. Affection

Affection factor includes the students' interest, motivation, attitudes and beliefs. The affective factors have an important role in influencing what is understood by the readers (Alderson, 2000 p. 32).

c. Purpose of reading

Efficient reading consists of clearly identifying the purpose in reading. Purposes of reading help the reader to focus on information that they want to find

out. A reader can have problems in understanding a text if he reads with no particular purpose in mind (Alderson, 2000 p. 32; Brown, 2001 p. 306).

d. Vocabulary Mastery

Vocabulary mastery is essential to reading comprehension. It is impossible to understand the text if the readers do not know much about a significant number of the words in the text. By mastering much vocabulary, the reader can construct the meaning of the text easily (Klinger, Vaughn, and Boardman 2007 p. 47).

From the theories above, it can be concluded that reading comprehension is not a single process. It is a complex process which is affected by some factors such as the reader's background knowledge of the text, the reader's motivation and interest in reading, the reader's purpose of reading, and the reader's vocabulary mastery. All of those factors relate to each other in influencing the reader's reading comprehension ability.

2.6 The Concept of Critical Thinking

Nikou, Bonyadi, and Amirikar (2015) explain that the definitions of the concept of critical thinking are broad, the definitions range from multiple perspective: philosophical, psychological, and educational. Some of definitions given by experts are sometimes different. However, it is important to gather the serious definition to construct the definition of critical thinking.

Critical thinking can be defined as the ability to identify and analyze problems as well as seek and evaluate relevant information in order to reach an appropriate conclusion (Watson and Glaser, 2012). Good conclusion can be reached by identifying, analyzing, and evaluating the matter issues.

Critical thinking is also called as “reasonable thinking”. It means that having good and logical reason is the major characteristic of critical thinking skill needed when drawing conclusion or making decision.

Paul and Elder (2008) define critical thinking as the art of analyzing and evaluating thinking with a view to improving it. In line with Paul and Elder opinion, Freeley and Steinberg (2007) describe critical thinking as the ability to analyze, criticize, and advocate ideas, to reason inductively and deductively, and to reach factual or judgemental conclusions based on sound inferences drawn from unambiguous statements of knowledge or belief. Critical thinking is about analyzing, evaluating, and criticizing something (knowledge, information, problem, and issue) in order to find good conclusion and judgment.

Meanwhile, Wasshburn (2010) points out that critical thinking relates to the activity to criticize people or things both in terms of negative side of them that may lead to the comprehension and best judgment about them.

From the explanation above, it shows that critical thinking ability is a process of evaluating and analyzing the problems or some issues with logical and reasonable thinking. It means that before making decision or judgment, acritical thinker has to think critically about what should to do or believe in order to make a good and reasonable judgment and decision.

To sum up, critical thinking is the ability to think critically, reasonably, and analytically about the problem or the matter issue. Understanding cause

and effect as well as evaluating information is required in order to reach good and logical interpretation from the problem or the matter issue. Such thinking is needed in every aspect of people' life as making decision and having problem are the part of life.

2.7The Characteristic of Critical Thinker

Critical thinking as defined above is the ability to think critically, that kind of ability can be seen by someone ability in analyzing and evaluating the problems or issue. Furthermore, knowing the cause and effect, can evaluate and make argument and interpretation from the problem or the matter issue. Therefore, a critical thinker should have such thinking abilities. Media educator, Ferrent (1997) suggests the following fifteen characteristics of a critical thinker:

1. Ask related questions of the issues.
2. Assess statement and arguments.
3. Able to admit a lack of understanding or information.
4. Have a sense of curiosity.
5. Interested in finding new solutions.
6. Able to define clearly a set of criteria for analyzing ideas.
7. Willing to examine beliefs, assumptions, and opinions and weigh them against facts.
8. Listen carefully to others and are able to give feedback.
9. Suspend judgment until all facts have been gathered and considered.
10. Look for evidence to support assumptions and beliefs.

11. Able to adjust opinions when ne facts are found.
12. Look for evidence.
13. Examine problems closely.
14. Are able to reject information that is incorrect or irrelevant.
15. See that critical thinking process of self-assessment.

Paul and Elder (2008), one of the leading researchers on critical thinking, mentioned some characteristic of a critical thinker as cited below:

1. Find out the critical questions and problems, and clearly formulating them;
2. Collect and evaluate relevant information, using abstract ideas to interpret it effectively;
3. After finding well-reasoned conclusions and solutions, then testing them against relevant criteria and standard;
4. Having open minded though by recognizing and assessing with their assumption, implications, and practical consequences; and
5. Find the solutions of the complete problems by effectively discussing it with other.

From the characteristics mentioned above, it can be drawn a conclusion that a good critical thinker must have the ability to evaluate information, examine, and analyze the evidence, as well as think open mindedly. A cultivated critical thinker could be expressed in the phrase “reasonable person” (Hunter, 2009). Such person always tries to evaluate and criticize information, issue and evidence before making decision, judgment as well as conclusion.

2.8 The Kinds of Critical Thinking Skill

Critical thinking includes the component skills of analyzing arguments, making inferences, judging or evaluating, and making decisions or solving problems. Such skill has many levels of thinking as cited by Teys (2007), that critical thinking can be divided into two categories, namely lower order thinking and higher order thinking. Lower order thinking skills or basic skills covers many skills such as memorizing, summarizing, labeling, observing, and sorting. Meanwhile, higher order skills as usually called as comprehension skills include application, synthesis, making inference, comparison/contrast, justification, analysis, evaluation, moral reasoning, and using inductive and deductive reasoning.

Meanwhile, Bloom (1956), proposes six categories of thinking as usually called as “Bloom Taxonomy”. The taxonomy includes these categories; knowledge, comprehension, application, analysis, synthesis, and evaluation. The first two categories, knowledge and comprehension, are regarded as lower order thinking which do not require critical thinking but the last four categories are include application, analysis, synthesis, and evaluation, require the higher order thinking or critical thinking. Here, is the table of Bloom Taxonomy for the clear explanation:

Table 2
Bloom Taxonomy

No.	Categories	Definition
1.	Knowledge	Memorizing facts, figures, and basic processes
2.	Comprehension	Understanding and illustrating the facts and knowledge
3.	Application	Generalizing or applying the facts to other contexts and situations
4.	Analysis	Understanding why the facts are the way they are; breaking down the problems
5.	Synthesis	Making connections between different elements on one's own and try to combine them
6.	Evaluation	Critically using one's knowledge to ascertain the quality of information

Based on Table 1 above, it shows that the first and the second categories of thinking are basic or lower order thinking. It is about understanding, the knowledge and the fact. Therefore, the higher and critical thinking ability is not required. While, the third until the sixth categories are higher order thinking activity involve application, analysis, synthesis, and evaluation. Consequently, the higher order thinking as usually called as critical thinking ability is needed in those thinking activities. However, using the higher order skill or critical thinking skill requires both knowledge and comprehension of the content or fact; therefore, all levels of thinking should be encouraged.

Meanwhile, based on Ruggiero (2004), there are three basics of thinking, they are investigation, interpretation, and judgment. For the further explanation, we can see the table below:

Table 3. Basics of Thinking

No.	Activity	Definition	Requirements
1.	Investigation	Finding the evidence such as data that will be the answer key of the question about the issue	The relevant and adequate evidence is must
2.	Interpretation	Deciding what the meaning is of the evidence	The interpretation must be more reasonable than competing interpretations
3.	Judgement	Determining a conclusion about the matter issue	The conclusion must meet the test of logic

Based on Table 2 above, the critical thinking encompasses the activity of investigation which is the activity to find the evidence such as data or fact in order to solve their issue, the activity of interpretation which the activity to decide the evidence meaning, and the activity of judgment, this is the activity of drawing the conclusion about the matter issue. All of the three activities stated above are the basic of critical thinking activities.

In conclusion, the ability of critical thinking can be seen in many kinds of thinking activities. Those thinking activities are investigating, analyzing, judging, evaluating, etc. Some of thinking activities require lower thinking skills, while some needs higher level of thinking that it usually called critical thinking.

2.9The Benefits of Critical Thinking Skill

Critical thinking skill is very useful in human life, particularly in this modern era. Thinking critically can help people be easier to face their life. The ability to think clearly, critically, and rationally is crucial as those ability are

needed in making decision, solving problems or evaluating some issues that cannot be separated from human life. Critical thinking skill is obviously indispensable used in many field such as in education, research, finance, social, politics, management or other aspects of life.

Moreover, critical thinking is valuable for two main reasons as stated by Hunter (2009). First, thinking critically increase knowledge. Second, thinking critically is essential to being autonomous. It means that by thinking critically can make up someone's own mind about what to believe or what to do, which is essential to.

According to Paul and Elder (2008), there are some benefits of critical thinking as mentioned below:

- a. Bringing a clear and accurate formulation of vital questions and problems.
- b. Having an effective interpretation of ideas and information.
- c. Making reasonable conclusion and solutions which are in accordance with relevant criteria and standards.
- d. Thinking inclusively or open minded.
- e. Having an effective communication with other in coping with complex problem.

Meanwhile, Cornell (2005) quoted some benefits of critical thinking ability as stated below:

- a. The work can be conducted accurately and carefully.
- b. The ability to determine something which is relevant in writing (nothing) can be more accurate and specific.

- c. The ability to conduct the problem solving and project management can be done accurately.
- d. It can raise feeling of confident of successful outcome in complex problems and project.
- e. The work and academic attainment can be better improved.

To sum up, the ability of critical thinking obviously beneficial for the people because it is used in many aspects of life such as in workplace, education, politic or social life. Having critical thinking ability can help people solve the problem carefully and accurately. Most importantly, people can make reasonable conclusions and solutions from the issues arise.

2.10 Critical Thinking and Reading Comprehension

According to Aloqaili (2011), the connection between critical thinking and reading comprehension is related to schema theory. Shihab (2011, p. 209) asserts “reading involves an interactive process in which the reader actively produces meaning through a set of mental processes.” Readers construct a meaningful representation of text using their schemata (Gilakjani & Ahmadi, 2011). Schemata are considered to be necessary for regulating and organizing the readers’ reading experience and his ability to interpret the meaning of the text. Readers need to think while reading to bridge his own previous knowledge and new knowledge in the text (Shihab, 2011).

Anderson (1994) explains that there are six ways in which schemata function in thinking and remembering new information. Those are: 1) Most new knowledge is gained by assimilating new information into existing structure;

therefore, subject matter learning should build on prior knowledge whenever possible. 2) The students' existing schemata help to allocate attention by focusing on what is pertinent and important in newly presented material. 3) Schemata allow and direct the inferential elaboration of incoming information and experience. 4) Schemata allow orderly searches of memory by providing learners with a guide to the types of information that should be recalled. 5) Schemata facilitate the thinking skills of summarizing and editing. 6) Schemata permit inferential reconstruction when there are gaps in memory, which means that they help the learners generate hypotheses about missing information.

To be successful readers, they must have inferential and reasoning skills to establish meaningful connections between information in the text and relevant background knowledge. While Gallo (1987) uses metacognitive strategies to develop critical thinking. She suggests that improved critical thinking requires developing the processes of observation, analysis, inference, and evaluation.

2.11 Previous Related Studies

There are many studies related to critical thinking and reading comprehension, such as by Forood and Farahani (2013) and Hosseini, Khodaei, Sarfallah and Dolatabadi(2012). The study by Forood & Farahani (2013) aimed to find out whether there was any significant difference between the performance of high and low critical thinkers on factual, referential, and inferential reading comprehension questions. The study used a descriptive, ex post facto design. The sample of this study included 60 Iranian sophomores studying English translation and Teaching English as a Foreign Language at Roudehen Islamic Azad

University. For the instrumentation, the researchers used the Farsi version of Watson-Glaser Critical Thinking Appraisal Test Form A and reading comprehension test which was taken from TOEFL test. They found out that (a) there was a significant difference between high and low critical thinkers on their performance on factual reading comprehension questions, (b) there was a significant difference between high and low critical thinkers on their performance on referential reading comprehension questions, and (c) there was a significant difference between high and low critical thinkers on their performance on inferential reading comprehension questions.

In research conducted by Hosseini et.al(2012), they investigated the relationship of critical thinking ability, reading comprehension and reading strategy among 70 male and female Iranian university students majoring in English Translation and English Literature. The data was collected through the TOEFL reading comprehension test, a critical thinking ability test and Reading Strategy Inventory. To find the relationship among the participants' critical thinking, reading comprehension and each type of reading strategies, Pearson product-moment correlation was run. To predict the value of dependent variable (reading comprehension), from a number of independent variables (critical thinking and reading strategies) and to see which variables are the best predictor of dependent variable (reading comprehension), the researchers used multiple regression analysis. The findings revealed there was a significant positive relationship between the readers' critical thinking ability and reading strategy, in general and metacognitive and cognitive reading strategy, in particular. Moreover,

there was a significant positive relationship between critical thinking and reading comprehension. The results also revealed that cognitive and affective strategies along with critical thinking ability act as the best predictors of reading comprehension.

2.12 Research Setting

In 2007 tarbiyah faculty in IAIN radenfatah opened new major, pendidikanbahasaInggris program. This program was opened based on consideration and high interest of society who wanted to follow this program, so by the agreement and decision of DIRJEN PENDIS DEPAG RI No.: DJ.I/178/2007 English Education Study program was opened.

2.12.1 Geographic Location

English education study program is located in jalan Prof. K.H. ZainalAbidinFikri, KM. 3,5, Lawangkidul, Ilirtimur II, Pahlawan, Kemuning, Kota Palembang, Sumatera Selatan. English Education is located in Tarbiyah Faculty region, it is next to Arabic major and behind Islamic Education major.

2.12.2. Vision, Mission and Aims

2.12.2.1. Vision

In order to be the better major, this following is the vision of English Education Study Program:

To be well-quality and healthy major also be able to produce professional English education graduates, Islamiccharacteristic,integrated, and has international reputation in 2022.

2.12.2.2. Mission

There are some missions that English Education study Program would like to achieve as the following;

1. Organize and develop professional and well-quality English Education
2. Develop educational science research and teach relevant English that related to society need
3. Prepare professional English Education graduates, islamic characteristic, and have international reputation
4. Develop devotion to society to be pro-active and participative suit to competency and capacity that related to English Education
5. Develop cooperation network or partnership with other institutions domestic and abroad.
6. Develop and keep the value, and academic moral control the quality of English education major

2.12.2.3. Aims

To produce professional, Islamic characteristic, integrated graduates and have international reputation that can answer the problem and society need that related to English education

2.12.3. Lecturers in English Education Study Program

There are 14 permanent lecturers in English education study program, some of the lecturers are magister graduates and some of them have finished their

doctor program. The table of Lecturers English Education study program is showed as the picture below:

Table 4.Lecturer of English Education Study Program

No.	Name	Place & Date of Birth	Educational Background
1.	Dr. Dian Erlina, S.Pd, M.Hum	Palembang, 02-01-1973	S1 FKIP Unsri. S2 UGM S3 UNJ
2.	Dr. Dewi Warna, M.Pd	Prabumulih, 23-07-1974	S1 FKIP Unsri, S2 Unsri, S3 UNJ
2.	Drs. Herizal, M.A	Palembang, 21-10-1965	S1 FKIP Unsri, S2 University of Canberra Australia
3.	Renny Kurniasari, M.Pd	Baturaja, 07-06-1979	S1 Unsri, S2 Unsri
4.	Dr. Annisa Astrid, M.Pd	Palembang, 23-11-1980	S2 Unsri, S3 U. Semarang
5.	Hj. Lenny Marzulina, M.Pd	Rejang Lebong, 31-01-1971	S1 Unsri, S2 Unsri
6.	M. Holandyah, M.Pd	Ngulak,(Muba) 07-05-1974	S1 UPGRI, S2 UPGRI
7.	Amalia Hasanah, M.Pd	Palembang, 31-07-1979	S1. U. Padjajaran. S2. Unsri
8.	Manalulaili, M,Ed	Sri Bendung OI. 15-04-1972	S1 Unsri. S2 University of Flinders
9.	Roma Nur Asnita. M.Pd	Palembang, 31-12-1975	S1 FKIP Unsri. S2 Unsri. S3 UNJ
10.	Eka Sartika, M.Pd	Palembang, 01-03-1985	S1 UPGRI, S2 Unsri
12.	Beny Wijaya, M,Pd	Air Itam, 29-09-1990	S1 Unsri, S2 Unsri
13.	Nova Lingga Pitaloka, M,Pd	Sungai Lilin, 26-10-1990	S1 Unsri, S2 Unsri

14.	Winy agustia Riznanda, M,Pd	Palembang, 18- 081983	S1 Unsri S2 Unsri
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(Source:English Education Study Program in academic year 2017-2018)

2.12.4. Students in English Education Study Program

There are 466 students in English Education study program, they are from second semester until seventh semester. The tabel of student English Education study program is showed as the picture below:

Table 5.

The Student of English Education Study Program

No	Semester	Number of Students
1	II	152
2	IV	128
3	VI	103
4	VIII	83
Total		466

(Source:English Education Study Program in academic year 2017-2018)

2.12.5. Facilities and Infrastructure in Pendidikan Bahasa Inggris

Here are the details of the facilities and infrastructure in PBI UIN Raden Fatah Palembang.

Table 6.

Facilities and Infrastructure in Pendidikan Bahasa Inggris

No	Name	Details	Quantity
1	Classroom	PBI 1 - 5	5
2	Restroom	1 per class (inside) 2 (outside)	7

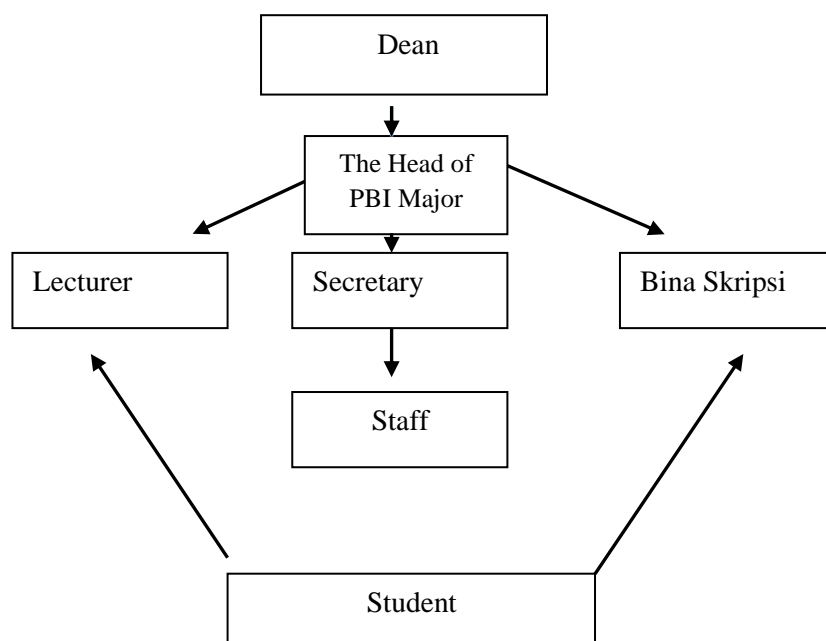
3	Air Conditioner	2 per class 2 in PBI Office	12
4	Projector	-	2
5	Department room	1 st floor multimedia building	1
6	Computer Printer	1 1 Department room	2
7	Language laboratory	2 nd floor PIU	1

2.12.6 Organization Structure

The organization structure is showed as the picture below:

Table 7.

The organization structure of English Education Study Program



2.13Hypotheses

The hypotheses of this study are proposed in the forms of null and research hypotheses below:

1. H_0 : There is no correlation between the students' critical thinking and their reading comprehension.

H_1 : There is a correlation between the students' critical thinking and their reading comprehension.

2. H_0 : There is no influence of students' critical thinking and their reading comprehension.

H_1 : There is an influence of students' critical thinking and their reading comprehension.

2.14 Criteria for Testing Hypothesis

To test the hypothesis above, the researcher will use these criterions;

1. If p- value is higher than 0.05 ($p > 0.05$), the level of significance is 5%, H_0 is accepted and H_a is rejected.

2. If p- value is less than 0.05 ($p < 0.05$), the level of significance is 5%, H_0 is rejected and H_a is accepted.

CHAPTER III

RESEARCH METHODOLOGY

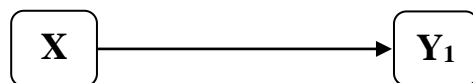
This chapter presents (1) research design, (2) research variables, (3) operational definitions, (4) subject of the study; population and sample, (5) data collection, (6) validity and reliability, and (7) data analysis.

3.1 Research Design

In this study, the writer used correlational study. Correlational study was applied since the writer mainly intended to find out the correlation among variables. Creswell (2005, p. 325) states that a correlation is a statistical test to determine the tendency or pattern for two (or more) variables or two sets of data to vary consistently. In this study, the writer found out whether or not there was correlation between variables; critical thinking and reading comprehension.

3.2 Research Variables

This study covered one independent variable, critical thinking and one dependent variable, reading comprehension achievement. The paradigm of this research was illustrated in the following figures.



X = Students' Critical Thinking

Y = Students' Reading Comprehension

3.3 Operational Definitions

To avoid the possibility of misinterpretation about some terms in this research, especially those used in the title, the definitions were provided. *Reading comprehension* is the understanding of contents of a written text, interpreting new information and assimilating this information into memory structures. *Critical thinking* means skills to evaluate, analyze, and extend (create) an argument possessed by English Education Study Program students of UIN Raden Fatah Palembang.

3.4 Subject of the Study

3.4.1 Population

Population is the larger group to which one hopes to apply the results. (Fraenkel, Wallen & Hyun, 2012, p. 91). Population is the larger group to which one hopes to apply the results. (Fraenkel, Wallen & Hyun, 2012, p. 91). The population of this study was all the students of EFL students of UIN Raden Fatah Palembang in the academic year 2013-2016. It consisted of 16 classes which the number of students from each class were varied. The distribution of population of the study can be seen below.

Table 8

Distribution of Population

No	Semester	Number of Students
1	II	152
2	IV	128
3	VI	103
4	VIII	83
Total		466

Source: (Documentation of Administration Staff, 2017)

3.4.2 Sample

Sampling is the process of selecting a number of individuals for a study in such a way that the individuals represent the larger group from which they were selected (Gay, 2000). In this study the writer chose the sample based on purposive sampling (judgemental sampling). In purposive sampling, investigators use personal judgement, based on previous knowledge of population and the specific purpose of the research, to select a sample (Fraenkel, Wallen & Hyun, 2012, p. 100). It is a non random sampling technique in which the writer select the sample intentionally. The writer took the students who had already taken Reading courses (Reading I, Reading II, Reading III, and Reading IV) as sample. Nonetheless, the eight semester students have already finished the entire lectures in the class and they are working with their thesis. Consequently, it was quite difficult for the researcher to collect the data from them. For this reason, only the fifth semester students were contemplated as the

sample. As the result, there were about 123 students. The distribution of the sample can be seen below.

Table 9
Distribution of Sample

No	Class	Students
1	PBI A	31
2	PBI B	31
3	PBI C	30
4	PBI D	31
Total		123

3.5 Data Collection

The researcher used two kinds of instruments to collect the data; the first was distributing the critical thinking test, and the second was giving reading comprehension test.

3.5.1 Critical Thinking Test

To measure the students' critical thinking skill, the writer used the Cornell Critical Thinking Test (CCTT). The CCTT is a standardized test developed by R. Ennis, Millman, and Tomko in 2000. This test was considered suitable to be used in the present study because it was claimed by its developers to be a general critical thinking test which attempts to measure the critical thinking skills as a whole and it is best used for grade 9 to 12, and college students. Moreover, the test had been widely used throughout the world more than twenty years to measure critical thinking skill. The test was developed based on a sound rationale and that the test items were intensively discussed by the test developers who were scholars involved in the Illinois Critical

Thinking Project. For CCTT, the items are in the form of “Yes, No, Maybe” questions. The total numbers of questions were 44 questions. The specifications of critical thinking test were as follows:

Table 10
The Specification of CCTT

No	Content	Indicator	No. of Items
1	Induction	The students are able to generalize and explain the arguments	1,2,3,4,5,6,7,8,9,10,11,12,13,14
2	Deduction	The students are able to make decision and conclusion about the arguments	15,16,17,18,19,20,21,22,23,24,25,26,27,28,29
3	Credibility	The students are able to assess the credibility of sources of information and claims they make	30,31,32,33,34,35,36,37,38,39,40,41
4	Assumption Identification	The students are able to identify assumptions, reason, examine the arguments	42,43,44
TOTAL			44

3.5.2 Reading Comprehension Test

To measure the dependent variable, students’ reading comprehension, the writer used reading comprehension test which is taken from Cliff’s TOEFL Preparation consisted of 5 passages with 50 questions. The reading comprehension test involved the aspects mentioned by Cooper and Lewy (1988). They are: decoding vocabulary, identifying main ideas, identifying cause and effects, identifying detailed information, sequence, and making inferences or drawing conclusions, and identifying the writer’s purpose. The

type of the question was multiple choice. Below is the item specification for reading comprehension test.

Table 11
Reading Comprehension Test Specification

Aspects of Reading Comprehension	Numbers of Item	Item Number
Main idea	6	10,12,20,22,30,40
Detail	9	6,27,35,37,44,45,46,48,50
Cause- effect	4	4,15,23,39
Inference	5	3,13,29,38,42
Vocabulary	20	1,2,5,7,9,14,16,17,21,24,25,28,31,32,33,36,41,43,47,49
Sequence	3	8,18,19,
Author's tone	2	11,26,
Total	50	50

The result of students' reading comprehension achievement were classified based on the following table:

Table 12
The Classification of Reading Comprehension

Range	Qualification
80 – 100	Excellent
70 – 79	Good
60 – 69	Average
50 – 59	Poor
0 – 49	Very Poor

Source: (Academic Staff PBI, 2016)

3.6. Research Instrument Analysis

3.6.1 Validity Test

Validity refers to the degree to which such evidence supports any inferences a researcher makes on the basis of data collected with a particular evidence (Wallen & Fraenkel, 1991).

3.6.1.1 Validity of Critical Thinking Test

For critical thinking test, it was a ready-made test. There was no need to conduct the validity test anymore. Moreover, the developers stated that the test was adequate to measure the students' critical thinking.

3.6.1.2 Validity of Reading Comprehension Test

Since the reading test was taken from Cliff's TOEFL preparation. There was no need to conduct the validity test anymore because it is an international instrument commonly used to measure the ability of English speakers or learners of English by institution like senior high school or university.

3.6.2 Reliability Test

Reliability refers to the scores from an instrument which is stable and consistent (Creswell, p. 159). The reliability coefficient of the test should be ≥ 0.70 to be considered as a reliable.

3.6.2.1 Reliability of Critical Thinking Test

Meanwhile, the developers claimed that the reliability coefficient of the CCTT ranged from .67 to .90 are considered higher than 0,70 which meant this critical thinking test was considered reliable.

3.6.2.2 Reliability of Reading Comprehension Test

Since the reading comprehension test was taken from Cliff's TOEFL, there was no need to conduct the reliability test anymore. The reading comprehension test was adequate to measure students' reading comprehension achievement.

3.6.3 Readability Test

Readability test was done to know the appropriate level of reading texts for students' class level in comprehending the reading text. It meant that the readability test was done to put the reading texts in an appropriate class meeting based on the difficulty level of each reading text during conducting research. Readability test was measured by using online readability test which is accessed from <http://www.readabilityformulas.com>. There were seven categories in reading text level.

Table 13
The Categories in Reading Text Level

No	Flesch-Kincaid Reading Ease Score	Text Category
1	90-100	Very Easy
2	80-89	Easy
3	70-79	Fairly Easy
4	60-69	Standard
5	50-59	Fairly Difficult
6	30-49	Difficult
7	0-29	Very Confusing

Table 14
The Result of Readability Text

No	Passage	Text Statistics		Flesch Reading Ease Score	Text Level	Grade Level
		Total of Sentence	Total of Words			
1	1 st passage	18	413	46.1	Difficult to read	13
2	2 nd passage	25	377	60.9	Standard	8
3	3 rd passage	23	344	54.7	Fairly difficult to read	10
4	4 th passage	11	290	33.6	Difficult to read	15
5	5 th passage	12	303	32.1	Difficult to read	15

3.7 Data Analysis

3.7.1 Instrument Analysis

The instruments, both critical thinking test, and reading comprehension test, were analyzed in order to gain the data of the study.

3.7.1.1. Critical Thinking Test Analysis

After giving the critical thinking test, the writer checked, and then scored the results manually to know students' critical thinking level. The results of critical thinking level were analyzed by using percentage of students' choice as follows:

$$\frac{\text{numbers if students choose the correct answer}}{\text{all questions}} \times 100\%$$

To interpret the students' individual score, the range of scores of critical thinking used as follows: High, Medium, and Low.

Table 15

Students' Competency Level	Range of Score
High	71-100
Medium	50-70
Low	0-49

Source: critical thinking disposition self-rating form, 2011 p. 13

3.7.1.2. Reading Comprehension Test Analysis

The reading comprehension test consisted of 50 items. The highest score were 100 so it meant that the score of each item was 2. Then, the raw score were inverted to know the level of the students' critical thinking and reading comprehension. It consisted of the percentage of range and the qualification. The percentage of range was used to know the students' reading score.

Table 16

Range	Qualification
80 – 100	Excellent
70 – 79	Good
60 – 69	Average
50 – 59	Poor
0 – 49	Very Poor

3.7.2. Pre-requisite Analysis

Since the study was in the notion of parametric statistics, correlation and regression, it was necessary to do pre-requisite analysis. Thus, before analyzing the data, the researcher found out whether the data distribution between the variables was normal and linear or not.

3.7.2.1. Normality Test

A normality test was used to determine whether sample data had been drawn from a normally distributed population or not. The purpose of normality test in this research was to know the data of each variable normal or not. The researcher applied Kolmogorov-Smirnov test by using SPSS 20. The data was distributed normally if the p-value is greater than 0.05 ($p > 0.05$).

3.7.2.2. Linearity Test

The linearity was conducted to measure whether the data between the variables were linear or not. Therefore, the researcher applied Linearity test by One Way ANOVA in SPSS Version 20. The data were linear if p-value was less than 0.05 ($p\text{-value} < 0,05$), the data correlation were linearly. If the data were normal and linear, the further analyses are able to be administered.

3.7.3. Correlation Analysis

To find out whether critical thinking of students, as whole, had any correlation with students' reading comprehension achievement or not, the researcher applied Pearson- Product Moment Correlation Coefficient. Still, by using the same statistical method, Pearson-Product Moment, the correlation between each aspect of students' critical thinking, and their reading comprehension achievement were established. After that, if there was found any correlation between the variables, the analysis could be continued to see the influence of the variable.

3.7.4. Regression Analysis

As there would be a probability of correlation, thus, in the study would be conducted Regression test in relation to see the influence of students' critical thinking as whole. The influence of the independent variable, critical thinking, would be gained by looking at the coefficient determination (*R Square*).

CHAPTER IV

FINDINGS AND INTERPRETATIONS

This chapter presents (1) research findings, and (2) interpretations.

4.1 Findings

4.1.1. Data Descriptions

Table 10 shows the descriptive statistics of variable measured. The data presented are minimum score and maximum score, mean score, and standard deviation of the result of the students' critical thinking, and their reading comprehension achievement.

Table 17

Descriptive Statistics of Variables Measured

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
CT	108	11	70	48.42	11.959
RCT	106	16	56	32.13	8.937
Valid N (listwise)	106				

Critical thinking minimum score was 11 and the maximum score was 70. Critical thinking's mean score was 48.42 and the standard deviation was 11.959. The last, reading comprehension minimum score was 16 and maximum score was 56. The mean score of reading comprehension test was 32.13 and the standard deviation was 8.937.

Table 18

Score Distribution of Critical Thinking

Level of Critical Thinking	Raw Score	Number of Students	Percent (%)
High	71-100	0	0
Medium	50-70	67	62
Low	0-49	41	38
Total		108	100

Based on the descriptive data above, there were 0% students who had very high critical thinking, 62% had medium critical thinking, and 38% had very low critical thinking.

Table 19

Score Distribution of Reading Comprehension Achievement

Categories of Reading Comprehension	Score Interval	Number of Students	Percent (%)
Very Good	80 - 100	0	0
Good	70 - 79	0	0
Average	60 - 69	0	0
Poor	50 - 59	3	3
Very Poor	0 - 49	105	97
Total		108	100

From the data, it can be seen that there were students who 0% had a very good reading comprehension, 0% had good reading comprehension, 0% had average reading comprehension, 3% had poor reading comprehension, and 97% had very poor reading comprehension.

4.1.2 The Result of Pre-requisite Analysis

4.1.2.1 Normality Test

Tests of Normality

	Kolmogorov-Smirnov ^a		
	Statistic	Df	Sig.
Critical Thinking	.070	108	.296*

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

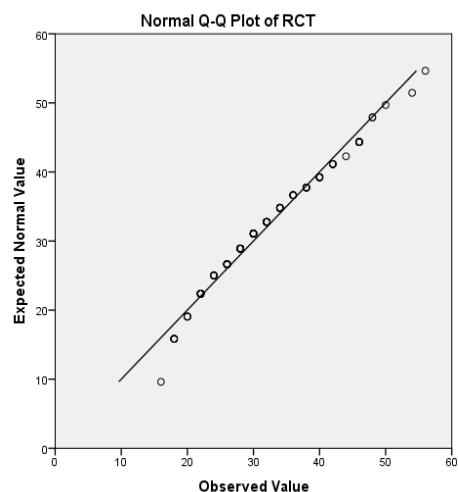
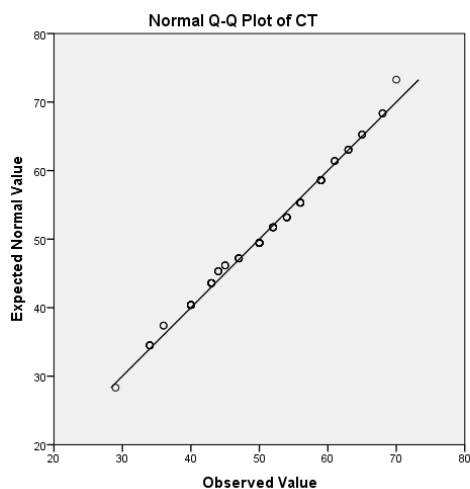
	Kolmogorov-Smirnov ^a		
	Statistic	Df	Sig.
Reading_Comprehension	.068	108	.316*

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Based on the results, it was found that the significance value of critical thinking was 0.396, and the significance value of reading comprehension was 0.316. Since all of the significance values are higher than 0.05, it can be concluded that the data are normally distributed. Therefore, the data could be used for further analysis.

The normal Q-Q plot of each variable is illustrated in the following figures.



4.1.2.2 Linearity Test

Table 20
ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1227.482	17	72.205	.888	.590
Within Groups	7158.669	88	81.349		
Total	8386.151	105			

Based on the ANOVA output table, value sig. Deviation from linearity of $.590 > 0,05$, it can be concluded that there is a linear relationship between the variables of Reading Comprehension with Critical Thinking.

4.1.3. The Result of Hypothesis Testing

In relation to the first problem in the research which aim was to seek the significant correlation between students' critical thinking and their reading comprehension, the researcher used Pearson Product Moment Correlation Coefficient to answer the first question. Moreover, based on the correlational analysis which can be seen in the Table 12, it was showed that the correlational coefficient of the test was 0.226 in which based on Fraenkel, Wallen, and Hyun (2012, p. 340) states that correlation coefficients below 0.35 show very weak relationship between variables. These relationships have almost no value in any predictive sense. Moreover, from the statistical analysis, it was also shown that the p-value was 0.020 which was less than 0.05 ($0.020 > 0.05$). Therefore, these scores explicitly indicated that it was insufficient to reject the null hypothesis that

is in the other words, there was a significant correlation between students' critical thinking and their reading comprehension.

Table 21

Correlations		
	CT	RCT
CT	Pearson Correlation	1
	Sig. (2-tailed)	0.226*
	N	108
RCT	Pearson Correlation	.226*
	Sig. (2-tailed)	.020
	N	106

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

The positive direction means the higher critical thinking skill level the students have, the higher their score of reading comprehension. Therefore, since the data provided that there was a significant correlation between the variables, the further analysis was conducted in the term of finding the significant influence between the variables.

4.1.4 Regression Analysis

This section answered the second research problem by analysing the result of descriptive statistic for critical thinking skill and reading comprehension. In addition, since there was significant correlation between critical thinking skill and reading comprehension, it can be inferred that students' critical thinking skill has significant influence on reading comprehension. However, regression analysis

was still used to find out if students' critical thinking skill influenced their reading comprehension.

Table 22

The Regression Analysis of Students' Critical Thinking Skill and Reading Comprehension

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	35.372	5.436		6.507	.000
	Critical Thinking Skill	.533	.072	.695	7.370	.000

a. Dependent Variable: Reading Comprehension

The result indicated that the students' critical thinking skill significantly influenced reading comprehension with t-value (7.370) was higher than t-table (1.671) with sig.value (.00) was lower than probability (.05). Therefore, there was significant influence between student's critical thinking and reading comprehension of English Education Study Program Students of UIN Raden Fatah Palembang. It means that there was a significant influence of students' student's critical thinking skill on reading comprehension.

In addition, to know the percentage of critical thinking skill influence on reading comprehension, R-square was obtained. The result of the analysis shown in Table 14 below.

Table 23
R-square Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.695 ^a	.484	.475	5.003

a. Predictors: (Constant), VAR00001

Table 20 revealed that the R-square was .484. It means that the students' critical thinking skill gave significant effect in the level of 48.4% toward reading comprehension, and 51.6% was unexplained factors value.

4.2. Interpretation

In order to strengthen the value of this study the interpretation is made based on the result of data analysis. According to the findings, there was a significant correlation between critical thinking reading comprehension. Also, there was a significant influence of critical thinking on reading comprehension in which critical thinking skill contributed 48.4% to students' reading comprehension.

The data distribution shows that most of the students were in medium level of critical thinking. This finding was the same as the study conducted by Husain et al. (2012) that the critical and analytical thinking skills among the engineering

students at Universiti Kebangsaan Malaysia were at moderate level despite their high academic achievement. This might happen because the students act as passive learners who think that they should memorize all the facts and information. It is in line with what Fahim and Ahmadian (2012) state that the practice in the academic setting usually views education as the transfer of knowledge. Moreover, critical thinking is barely taught explicitly and systematically within the educational framework (Chaffee, 1992). It results in the inability of the students to apply higher order thinking skills in evaluating information, situation, facts, assumptions, concepts or statements.

Next, for reading comprehension the data distribution shows there was a big percentage was in poor and very poor achievement. However, there was no one in a very good level of reading comprehension. This might happen due to some factors involving in comprehension. Based on conducting the research in PBI A, B, C, D class, it was found that they did not focus in doing the reading comprehension, because the research was done after they had taken subjects at college. Some of them were also doing the test by chatting with their friends. As stated by Lenz (2014) that it is affected by the reader's knowledge of the topic, knowledge of language structures, knowledge of text structures and genres, knowledge of cognitive and metacognitive strategies, their reasoning abilities, their motivation, and their level of engagement. It might be that the students were not engage fully during the test, or they had low motivation to do the test. Besides, their ability in thinking critically also influences their achievement in reading comprehension.

Furthermore, the finding revealed that there was significant correlation between critical thinking and reading comprehension achievement, and the strength of the correlation was high. It indicates that the more critically the students think, the higher achievement the students get in reading comprehension. It is likely caused by the skills involved in critical thinking, i.e analyzing, evaluating, and extending argument, which helped them in comprehending the reading passage. As asserted by Shihab (2011) that reading includes an interactive process in which the reader produces meaning through a set of mental processes actively. Readers should interpret, analyze, evaluate, and make inference in order to be able to grasp the meaning intended by the author. Further, the study conducted by Hosseini et, al. (2012) supports the result of this study. They found there was a significant positive relationship between the readers' critical thinking ability and reading comprehension.

The finding in the study was in line with the study of Assadi, Davatgar, and Jafari (2013). They found that students satisfaction critical thinking skill had significant positive correlations with reading skill. Results of this study show that students with higher critical thinking skill are more likely to receive higher scores in reading. Ruggiero (2004) stated that it can be due to the fact that critical thinking in general can help students to participate in tasks, and students with high critical thinking skill set higher goals and engage themselves in tasks which require considerable fact and evidence (Tays, 2007).

Rashid and Hashim (2008)also revealed the existence of positive and significant relationships among critical thinking ability and language proficiency

in foreign language learner. They found that there was a statistically significant positive relationship between critical thinking ability and language proficiency. Students who had high critical thinking ability also achieve at least a satisfactory level of proficiency in the target language.

Nikou, Boyadi, and Amirikar (2015) also show the existence of a significant positive correlation between critical thinking skill with the quality of reading skill. Therefore, the students who have good critical thinking skill, they must have good reading skill as well, particularly in reading comprehension. Meanwhile, the students who lack of the critical thinking skill, they usually have poor reading skill. Because having critical thinking skill make the students be able to comprehend the idea critically and creatively.

On the contrary, Sugianto (2014) could not find any significant effect between critical thinking and reading comprehension. It indicates that the differences of means between high critical thinking skill and low one are not significant. Even though college-students with higher critical thinking skill also perform higher in reading activity, in fact, the differences between high and low critical thinking are not quite significant in reading activities. The level of critical thinking skill either low or high, surprisingly does not give significant effect in reading activities though students with high critical thinking could make better writing. This indicates that high critical thinking does not automatically emerge and initiate students to make better reading task. This is contrary to research by Helix (2015) which showed a large significant positive correlation between critical thinking and reading ability of students in Florida State University; in

reading activities for college students of Florida State University, students' level of critical thinking skill affect students' ability in reading.

In short, the total contribution of students' critical thinking and their reading comprehension skill showed significant correlation and influence. However the unexplained factors also had contribution on student's reading comprehension. The findings of this study may have some pedagogical implications for teachers, students, and next researcher.

Finally, this study was successful in investigating the correlation and the influence between critical thinking and reading comprehension of the English Education Study Program Students of UIN Raden Fatah Palembang.

CHAPTER V

CONCLUSIONS AND SUGGESTIONS

This chapter draws the conclusion and suggestion which is laid from all of the description, explanation and discussion from all of the previous chapters.

5.1 Conclusions

Based on the findings and discussions, it was found that the finding accepted the theory that students' critical thinkin is factor that affects their reading comprehension significantly. The correlation coefficient was .226, and the p-value was .20 which was higher than .05 ($.20 > .05$). It can be implied that there was a significant correlation between students' critical thinking skill and reading comprehension of English Education Study Program Students of UIN Raden Fatah Palembang. This result also means that the students with high level critical thinking, has good reading comprehension. Whereas, the students who has poor critical thinking skill tends to have poor reading comprehension as well. It is proven by the Pearson Product Moment correlation coefficient result which the value is 0.695. Futhermore, critical thinking skill has 48 % contribution in the students' reading comprehension. Therefore, it can be concluded that the more critical the students think, the more creative and critical they are in comprehending the ideas. Those ability can lead the students have good reading, particularly in reading comprehension.

5.2 Suggestions

The results of this study show that there was a significant correlation between critical thinking skill and reading comprehension. It can be reached some suggestions for the students, teachers, and everyone involved in the teaching and learning process of reading.

For the lecturer, they are expected to design the reading course where they can teach both critical thinking skill and reading skill.. It is because there is significant relationship between critical thinking skill and reading comprehension. Futhermore, time for teaching critical thinking techniques in reading comprehension is recommended to increase. They also should teach critical thinking skill to the students because it has many impacts in students' real life. It is not only important for the students' academic performance such as reading comprehension but also can help students to face the problems in their real life because it is highly importance for students to be taught in lower grades so that they will be critical thinkers since early grade.

For students, they should be aware with the issue and problem happend around them. They have to always analyze and evaluate it to build their critical thinking skill. Hopefully, it can help them improve their critical thinking skill and reading comprehension as well.

Finally, it was recommended that further research be conducted to consider whether teaching approach, teaching method, teaching strategy, or teaching technique related to developt students'critical thinking skill. Additionally, for future researchers who have interest in this subject and their

are possibilities to correlate them with other variables since there are still many unexplained factors that can give contribution for students' reading comprehension.

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APPENDIX A

Cornell Critical Thinking Test Series THE CORNELL CLASS-REASONING TEST, FORM X

by

Robert H. Ennis
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General directions:

This is a test to see how well you do a *particular kind of thinking*.

We call it "class reasoning". You will see that you already do some of this kind of thinking. The sample questions make clear what is expected. DO NOT GUESS WILDLY. There is a scoring penalty for guessing wrong. If you think you have the answer, but are not sure, mark that answer. But if you have no idea, then skip the question.

There are 2 sample questions.

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*Published by Illinois Critical Thinking Project,
Department of Educational Policy Studies,
University of Illinois at Urbana
Champaign. Here is a reminder of the meaning of
the possible answers:*

- A. YES It must be true.
- B. NO It can't be true.
- C. MAYBE It may be true or it may not be true. You weren't told enough to be certain whether it is "YES" or "NO" question has only one correct answer.

Mark your answers on this booklet by drawing a circle around the right answer. Remember: If you have no idea what the answer is, skip the question and go on to the next. Do not guess wildly, but if you think you know, then answer the question.

Sample questions:

Read the first question and see how it is marked.

1. Suppose you know that
Bill is next to Sam.
Then would this be true?
Sam is next to Bill.

A. YES

B. NO

C. MAYBE

The correct answer is A, "YES". If Bill is next to Sam, then Sam must be next to Bill. It must be true, so a circle is drawn around "YES".

Here is another sample. This time you circle the answer.

2. Suppose you know that
The sparrow is over the
hawk.
Then would this be true?
The hawk is over the
sparrow.

A. YES

B. NO

C. MAYBE

You should have circled B. "NO". If the sparrow is over the hawk, then the hawk can't be over the sparrow. It can't be true.

Name : _____

Class : _____

1. Suppose you know that
All the cars in the garage are Mr. Smith's.
All Mr. Smith's cars are Fords.
Then would this be true?
All of the cars in the garage are Fords.

A. YES
B. NO
C. MAYBE

2. Suppose you know that
All John's pencils are blue.
Then would this be true?
At least some of John's pencils are not blue.

A. YES
B. NO
C. MAYBE

3. Suppose you know that
All the books about sailing are Bill's.
All the green books are Bill's.
Then would this be true?
At least some of the green books are about sailing.

A. YES
B. NO
C. MAYBE

4. Suppose you know that
None of Jane's dolls have hats.
Then would this be true?
None of the dolls that have hats are Jane's

A. YES
B. NO
C. MAYBE

5. Suppose you know that
All the red books are John's
Then would this be true?
All John's books are red.

A. YES
B. NO
C. MAYBE

6. Suppose you know that
All of Mary's books are about horses.
None of the books on the shelf are about horses.
Then would this be true?
At least some of Mary's books are on the shelf.

A. YES
B. NO
C. MAYBE

7. Suppose you know that
All Jean's pencils are red.

All the pencils on the table are red.
Then would this be true?
At least some of the pencils on the table
are Jean's.

- A. YES
- B. NO
- C. MAYBE

8. Suppose you know that
None of Sue's books are about animals
Then would this be true?
None of the books about animals are
Sue's.

- A. YES
- B. NO
- C. MAYBE

9. Suppose you know that
At least some of Kate's pencils are blue.
All the pencils in the box are blue.
Then would this be true?
At least some of Kate's pencils are in the
box.

- A. YES
- B. NO
- C. MAYBE

10. Suppose you know that
All Z's are Y's.
All Y's are X's.
Then would this be true?
All Z's are X's.

- A. YES
- B. NO
- C. MAYBE

11. Suppose you know that
None of the fifth grade boys are on the
football team.
John is a fifth grade boy.
Then would this be true?

John is not on the football team.

- A. YES
- B. NO
- C. MAYBE

12. Suppose you know that
All the members of the school band have
been in Boston.
No one in Frank's class has been in
Boston.
At least some members of the school
band are in Frank's class.

- A. YES
- B. NO
- C. MAYBE

13. Suppose you know that
All the second grade children are out on
the playground.
Then would this be true?
All the children out on the playground
are in the second grade.

- A. YES
- B. NO
- C. MAYBE

14. Suppose you know that
None of my shirts are wool.
None of the shirts hanging up in the
closet are wool.
Then would this be true?
At least some of my shirts are hanging
up in the closet.

- A. YES
- B. NO
- C. MAYBE

15. Suppose you know that
All of the boys in the class collect stamps.
All students who are not members of the
Stamp Club also do not collect stamps.

Then would this be true?
At least some of the boys in the class are
not members of the Stamp Club.

- A. YES
- B. NO
- C. MAYBE

16. Suppose you know that
All of the band members are working.
Then would this be true?
Everyone who is not working is also not in
the band.

- A. YES
- B. NO
- C. MAYBE

17. Suppose you know that
All the people who live on Main Street were
born in Milltown.
None of the students in Room 352 live on
Main Street.
Then would this be true?
None of the students in Room 352 were
born in Milltown.

- A. YES
- B. NO
- C. MAYBE

18. Suppose you know that
All Y's are X's.
No Z's are Y's.
Then would this be true?
No Z's are X's.

- A. YES
- B. NO
- C. MAYBE

19. Suppose you know that
All Z's are Y's.
No X's are Y's.
All T's are Z's.
Then would this be true?

No X's are T's.

- A. YES
- B. NO
- C. MAYBE

20. Suppose you know that
All students who do not have a star are
also not swimmers.
Frances is a swimmer.
Then would this be true?
Frances does not have a star.

- A. YES
- B. NO
- C. MAYBE

21. Suppose you know that
All the people in the auditorium are
watching a movie.
All students in the senior play are in the
auditorium.
Esther is a student in the senior play.
Then would this be true?
Esther is not watching a movie.

- A. YES
- B. NO
- C. MAYBE

22. Suppose you know that
All of the red pencils are broken.
Emil's pencil is not broken.
Then would this be true?
Emil's pencil is not red.

- A. YES
- B. NO
- C. MAYBE

23. Suppose you know that
All Z's are Y's.
All Things that are not X's are also not
Y's.
Then would this be true?

At least some Z's are not X's.

- A. YES
- B. NO
- C. MAYBE

24. Suppose you know that
At least some of Mrs. Brown's flowers are
not roses.

At least some of the flowers in the flower
show are not roses.

Then would this be true?

At least some of Mrs. Brown's flowers
are in the flower show.

- A. YES
- B. NO
- C. MAYBE

25. Suppose you know that
All the pencils in the box are yellow.
None of the broken pencils are yellow.
All Dick's pencils are in the box.
Then would this be true?
None of the broken pencils are Dick's.

- A. YES
- B. NO
- C. MAYBE

26. Suppose you know that
At least some of the boys in the class
have bicycles.
All those who are not here also do not
have bicycles.
Then would this be true?
No boys in the class are here.

- A. YES
- B. NO
- C. MAYBE

- A. YES
- B. NO
- C. MAYBE

27. Suppose you know that
All the pets of the Greens won some prize
in the pet show.

Fido is one of the Greens' pets.

Then would this be true?

Fido won a prize in the pet show.

- A. YES
- B. NO
- C. MAYBE

28. Suppose you know that
No animals are dogs.
Then would this be true?
No dogs are animals.

- A. YES
- B. NO
- C. MAYBE

29. Suppose you know that
Eileen is one of the children on the
playground.
Then would this be true?
Eileen is not one of the children on the
playground.

- A. YES
- B. NO
- C. MAYBE

30. Suppose you know that
All cats can fly.
All animals that can fly are black.
Then would this be true?
All cats are black.

- A. YES
- B. NO
- C. MAYBE

31. Suppose you know that
None of Bob's books are on the table, but
there are books on the table.
Then would this be true?
At least some of the books on the table
are not Bob's

- A. YES
- B. NO
- C. MAYBE

32. Suppose you know that
All Mary's pencils are yellow.
Then would this be true?
At least some of Mary's pencils are not
yellow.

- A. YES
- B. NO
- C. MAYBE

33. Suppose you know that
At least some of the green pencils are
Dick's.
Then would this be true?
All Dick's pencils are green.

- A. YES
- B. NO
- C. MAYBE

34. Suppose you know that
No X's are Y's.
Then would this be true?
No Y's are X's.

- A. YES
- B. NO
- C. MAYBE

35. Suppose you know that

All the cookies Jane made for the fair had
nuts in them.
All the cookies with nuts in them were sold.
Then would this be true?
All the cookies Jane made for the fair
were sold.

- A. YES
- B. NO
- C. MAYBE

36. Suppose you know that
All members of the football team weigh
over 150 pounds.
Henry does not weigh over 150 pounds.
Then would this be true?
Henry is on the football team.

- A. YES
- B. NO
- C. MAYBE

37. Suppose you know that
All the papers in the box are torn.
None of John's papers are in the box.
Then would this be true?
None of John's papers are torn.

- A. YES
- B. NO
- C. MAYBE

38. Suppose you know that
All of the boys are singing.
Then would this be true?
All of the people who are not singing are
also not boys.

- A. YES
- B. NO
- C. MAYBE

39. Suppose you know that
All the pencils in the box are green.

All Sue's pencils are sharp.
All the green pencils are Sue's.
Then would this be true?
At least some of the pencils in the box
are not sharp.

- A. YES
- B. NO
- C. MAYBE

40. Suppose you know that
None of my shirts are wool.
None of the shirts hanging up in the
closet are wool.
Then would this be true?
At least some of my shirts are hanging
up in the closet.

- A. YES
- B. NO
- C. MAYBE

41. Suppose you know that
All X's are Y's.
Then would this be true?
All things that are not Y's are also not
X's.

- A. YES
- B. NO
- C. MAYBE

42. Suppose you know that
All of the red pencils are broken.
Emil's pencil is not broken.
Then would this be true?
Emil's pencil is not red.

- A. YES
- B. NO
- C. MAYBE

43. Suppose you know that
At least some of Mrs. Brown's flowers
are not roses.

At least some of the flowers in the
flower show are not roses.

Then would this be true?

At least some of Mrs. Brown's flowers
are in the flower show.

- A. YES
- B. NO
- C. MAYBE

44. Suppose you know that
All the pencils in the box are yellow.
None of the broken pencils are yellow.
All Dick's pencils are in the box.

Then would this be true?

None of the broken pencils are Dick's.

- A. YES
- B. NO
- C. MAYBE

APPENDIX B

READING COMPREHENSION TEST

(Cliff's TOEFL Preparation)

Directions: In this section you will read several passages. Each one is followed by a number of questions about it. You are to choose the one best answer, A, B, C or D, to each question. Then, on your answer sheet, find the number of the question and fill in the space that corresponds to the letter of the answer you have chosen.

Questions 1-11

The work of the railroad pioneers in America became the basis for a great surge of railroad building halfway through the nineteenth century that linked the nation together as never before. Railroads eventually became the nation's number one transportation system, and remained so until the construction of the interstate highway system halfway through the twentieth century. They were of crucial importance in stimulating economic expansion, but their influence reached beyond the economy and was pervasive in American society at large.

Line
(5)

By 1804, English as well as American inventors had experimented with steam engines for moving land vehicles. In 1825, John Stevens ran a locomotive and cars around in a circular track on his New Jersey estate, which the public saw as an amusing toy. And in 1825, after opening a short length of track, the Stockton to Darlington Railroad in England became the first line to carry general traffic. American businesspeople, especially those in the Atlantic coastal region who looked for better communication with the West, quickly became interested in the English experiment. The first company in America to begin actual operations was the Baltimore and Ohio, which opened a thirteen-mile length of track in 1830. It used a team of horses to pull a train of passenger carriages and freight wagons along the track. Steam locomotive power didn't come into regular service until two years later.

(10)

However, for the first decade or more, there was not yet a true railroad system. Even the longest of the lines was relatively short in the 1830's, and most of them served simply to connect water routes to each other, not to link one railroad to another. Even when two lines did connect, the tracks often differed in width, so cars from one line couldn't fit onto tracks of the next line. Schedules were unreliable and wrecks were frequent. Significantly, however, some important developments during the 1830's and 1840's included the introduction of heavier iron rails, more flexible and powerful locomotives, and passenger cars

(15)

were redesigned to become more stable, comfortable, and larger. By the end of 1830 only 23 miles of track had been laid in the country. But by 1936, more than 1,000 miles of track had been laid in eleven States, and within the decade, almost 3,000 miles had been constructed. By that early age, the United States had already surpassed Great Britain in railroad construction, and particularly from the mid-1860's, the late nineteenth century belonged to the railroads.

(20)

(25)

(30)

1. The word "stimulating" in line 5 is closest in meaning to

- (A) helping (B) changing (C) promoting (D) influencing

2. The word "their" in line 6 refers to

- (A) railroad pioneers (B) railroads
(C) the interstate highway system (D) American society

3. Which of the following can be inferred from the passage?

- (A) The United States regarded Great Britain as a competitor in developing the most efficient railroad system

- (B) Steam locomotive power was first used in 1832
- (C) American businessmen saw railroads as a threat to established businesses
- (D) Steam locomotives replaced horses because of the distances across the country

4. The author concludes that for the first decade or more, there was not yet a true railroad system because

- (A) passenger cars were not stable, comfortable or large
- (B) locomotives were not powerful enough
- (C) schedules were unreliable and wrecks were frequent
- (D) lines were relatively short and not usually linked

5. The word “schedules” in line 23 is closest in meaning to:

- (A) safety procedures
- (B) employees
- (C) timetables
- (D) railroad tracks

6. Which of the following is NOT true about the 1830’s and 1840’s (line 24)

- (A) passenger cars became larger
- (B) schedules were reliable
- (C) locomotives became more powerful
- (D) tracks were heavier

7. The word “stable” in line 26 is closest in meaning to

- (A) fixed sound
- (B) supportive
- (C) reliable
- (D)

8. By what time had almost 3,000 miles of track been laid?

- (A) 1830 mid-1860s
- (B) 1836
- (C) 1840
- (D)

9. The word “surpassed” in line 29 is closest in meaning to

- (A) exceeded equaled
- (B) beaten
- (C) overtaken
- (D)

10. Where in the passage does the author outline the main conclusions about the importance of railroads in America?

- (A) Lines 3-7
Lines 29-31
- (B) Lines 14-18
- (C) Lines 19-21
- (D)

11. Why does the author include details about Great Britain in the passage?

- (A) To compare developments in both the United States and Great Britain
- (B) To illustrate the competitiveness between the two countries
- (C) To show where Americans got their ideas and technology from
- (D) To provide a more complete historical context

Questions 12-19

The Nobel Peace Prize is awarded annually and the first woman to win this prize was Baroness Bertha Felicie Sophie von Suttner in 1905. In fact, her work inspired the creation of the Prize. The first American woman to win this prize was Jane Addams, in 1931. However, Addams is best known as the founder of Hull House.

Line

(5) Jane Addams was born in 1860, into a wealthy family. She was one of a small number of women in her generation to graduate from college. Her commitment to improving the lives of those around her led her to work for social reform and world peace. In the 1880s Jane Addams traveled to Europe. While she was in London, she visited a 'settlement house' called Toynbee Hall. Inspired by Toynbee Hall, Addams and her friend, Ellen Gates Starr, opened Hull House in a neighborhood of slums in Chicago in 1899. Hull House provided a day care center for children of working mothers, a community kitchen, and visiting nurses. Addams and her staff gave classes in English literacy, art, and other subjects. Hull House also became a meeting place for clubs and labor unions. Most of the people who worked with Addams in Hull House were well educated, middle-class women. Hull House gave them an opportunity to use their education and it provided a training ground for careers in social work.

(10)

(15) Before World War I, Addams was probably the most beloved woman in America. In a newspaper poll that asked, "Who among our contemporaries are of the most value to the community?", Jane Addams was rated second, after Thomas Edison. When she opposed America's involvement in World War I, however, newspaper editors called her a traitor and a fool, but she never changed her mind. Jane Addams was a strong champion of several other causes. Until 1920, American women could not vote. Addams joined in the movement for women's suffrage and was a vice president of the National American Woman Suffrage Association. She was a founding member of the National Association for

the Advancement of Colored People (NAACP), and was president of the Women's International League for Peace and Freedom. . Her reputation was gradually restored during the last years of her life. She died of cancer in 1935.

(20)

(25)

12. With which of the following subjects is the passage mainly concerned?

- (A) The first award of the Nobel Peace Prize to an American woman
- (B) A woman's work for social reform and world peace
- (C) The early development of Social Work in America
- (D) Contributions of educated women to American society

13. Which of the following can be inferred from the passage?

- (A) the work of Baroness Bertha Felicie Sophie von Suttner was an inspiration to Jane Addams
- (B) Jane Addams is most famous for her opening of Hull House
- (C) those who lived near Hull House had very poor literacy skills
- (D) Jane Addams considered herself as a citizen of the world rather than of one particular country

14. The word "commitment" in line 6 is closest in meaning to

- (A) involvement
- (B) obligation
- (C) dedication
- (D) enthusiasm

15. Jane Addams was inspired to open Hull House because:

- (A) it gave educated women an opportunity to use their education and develop careers in social work
- (B) she traveled to Europe in the 1880s
- (C) she visited Toynbee Hall
- (D) she was invited by a 'settlement house' in Chicago

16. The word "their" in line 15 refers to

- (A) children of working mothers
- (B) middle-class women
- (C) visiting nurses
- (D) labor union members

17. The word "contemporaries" in line 18 is closest in meaning to

- (A) people of the same time
- (B) famous people still alive
- (C) elected officials
- (D) people old enough to vote

18. According to the passage, Jane Addams' reputation was damaged when she

- (A) allowed Hull House to become a meeting place for clubs and labor unions
- (B) joined in the movement for women's suffrage
- (C) became a founding member of the NAACP
- (D) opposed America's involvement in World War I

19. Where in the passage does the author mention the services provided by Hull House?

- (A) Lines 5-10
- (B) Lines 10-15
- (C) Lines 15-20
- (D) Lines 20-25

Questions 20-29

The medieval artists didn't know about perspective; they didn't want to make their people look like real, individual people in a real, individual scene. They wanted to show the truth, the eternal quality of their religious stories. So these artists didn't need to know about perspective.

Line In the European Renaissance period, artists wanted to show the importance of the

(5) individual person and his or her possessions and surroundings. A flat medieval style couldn't show this level of reality and the artists needed a new technique. It was the Italian artist Brunelleschi who discovered the technique of perspective drawing. At first the artists of the Renaissance only had single-point perspective. Later they realized that they could have two-pointed perspective and still later multi-point perspective.

(10) With two-point perspective they could turn an object (like a building) at an angle to the picture and draw two sides of it. The technique of perspective which seems so natural to us now is an invented technique, a part of the "grammar of painting". Like all bits of grammar there are exceptions about perspective. For example, only vertical and horizontal surfaces seem to meet on eye level. Sloping roof tops don't meet on eye level.

(15) For 500 years, artists in Europe made use of perspective drawing in their pictures. Nevertheless, there are a range of priorities that artists in displaying individual styles. Crivelli wanted to show depth in his picture and he used a simple single-point perspective. Cezanne always talked about space and volume. Van Gogh, like some of the other painters of the Impressionist period, was interested in Japanese prints. And Japanese artists until this century were always very strong designers of "flat" pictures. Picasso certainly made pictures which have volume and depth. However, he wanted to keep our eyes on the surface and to remind us that his paintings are paintings and not illusions.

It is technically easy to give an illusion of depth. However, a strong two dimensional design is just as important as a feeling of depth, and perhaps more important.

(20)

(25)

20. The passage mainly discusses

- (A) the difference between medieval and Renaissance art
- (B) how the technique of perspective influenced the modern art
- (C) the discovery of the technique of perspective
- (D) the contribution of Renaissance artists

21. The word “eternal” in line 3 is closest in meaning to

- (A) timeless
constant
- (B) infinite
- (C) frequent
- (D)

22. According to the passage, which is the main concern for medieval artists?

- (A) the individual person and his/her possessions and surroundings
- (B) real people, real scenes
- (C) eternal timeless truth of the earth
- (D) themes of religious stories

23. The discovery of perspective was the result of

- (A) Renaissance artists’ to prove that the medieval artists could show level of reality
- (B) the need to turn an object at an angle and draw more than one side of it
- (C) the subject being shifted from religious stories to individual person and surroundings.
- (D) natural evolution of human senses

24. The word “it” in line 12 refers to

- (A) the picture
the object
- (B) perspective
- (C) angle
- (D)

25. The word “Grammar ” in line 13 is closest in meaning to

- (A) construction
- (B) grammatical rules
- (C) rules and regulations
- (D) tones and volume

26. The author's purpose to give the example in line 14-15 is to
- (A) explain how perspective work in painting
 - (B) support two-pointed perspective
 - (C) illustrate that there are exceptions about perspective
 - (D) point out that the technique of perspective though seems so natural is an invented technique
27. The following artists' priorities in style shift away from perspective EXCEPT
- (A) Crivelli
Brunelleschi
 - (B) Cezanne
 - (C) Japanese artists
 - (D)
28. The word "Illusion" in line 25 is closest in meaning to
- (A) deception
illustration
 - (B) photograph
 - (C) decoration
 - (D)
29. It can be inferred from the passage that Renaissance artists
- (A) embraced the medieval style of eternal truth
 - (B) needed to develop a new approach towards painting to show a new level of reality
 - (C) were inspired by vertical and horizontal surfaces in inventing the technique of perspective
 - (D) saw two dimensional design more important than a feeling of depth

Questions 30-39

Line (5) There are two main hypotheses when it comes to explaining the emergence of modern humans. The 'Out of Africa' theory holds that homo sapiens burst onto the scene as a new species around 150,000 to 200,000 years ago in Africa and subsequently replaced archaic humans such as the Neandertals. The other model, known as multi-regional evolution or regional continuity, posits far more ancient and diverse roots for our kind. Proponents of this view believe that homo sapiens arose in Africa some 2 million years ago and evolved as a single species spread across the Old World, with populations in different regions linked through genetic and cultural exchange.

Of these two models, Out of Africa, which was originally developed based on fossil evidence, and supported by much genetic research, has been favored by

(10) the majority of evolution scholars. The vast majority of these genetic studies have focused on DNA from living populations, and although some small progress has been made in recovering DNA from Neandertal that appears to support multi-regionalism, the chance of recovering nuclear DNA from early human fossils is quite slim at present. Fossils thus remain very much a part of the human origins debate.

(15) Another means of gathering theoretical evidence is through bones. Examinations of early modern human skulls from Central Europe and Australia dated to between 20,000 and 30,000 years old have suggested that both groups apparently exhibit traits seen in their Middle Eastern and African predecessors. But the early modern specimens from Central Europe also display Neandertal traits, and the early modern Australians showed affinities to archaic Homo from Indonesia. Meanwhile, the debate among paleoanthropologists continues, as supporters of the two hypotheses challenge the evidence and conclusions of each other.

(20)

30. The passage primarily discusses which of the following

- (A) Evidence that supports the “Out of Africa” theory
- (B) Two hypotheses and some evidence on the human origins debate
- (C) The difficulties in obtaining agreement among theorists on the human origins debate
- (D) That fossils remain very much a part of the human origins debate

31. The word “emergence” in line 1 is closest in meaning to

- (A) complexity
- (B) development
- (C) appearance
- (D) decline

32. The word “proponents” in line 6 is closest in meaning to

- (A) experts
historians
- (B) advocates
- (C) inspectors
- (D)

33. All of the following are true except

- (A) three methods of gathering evidence are mentioned in the passage
- (B) the multi-regional model goes back further in history.
- (C) the Out of Africa model has had more support from scholars
- (D) DNA studies offer one of the best ways in future to provide clear evidence.

34. The word “slim” in line 14 is closest in meaning to

- (A) small
difficult
- (B) narrow
- (C) thin
- (D)

35. Which of the following is not true

- (A) the vast majority of genetic studies have focused on living populations
- (B) early modern human skulls all support the same conclusions
- (C) both hypotheses focus on Africa as a location for the new species.
- (D) early modern Australian skulls have similarities to those from Indonesia.

36. In line 18, the word “their ” refers to which of the following

- (A) Middle Easterners and Africans
- (B) skulls
- (C) central Europeans and Australians
- (D) traits

37. Which of the following is NOT true about the two hypotheses

- (A) Both hypotheses regard Neandertals to be the predecessors of modern humans
- (B) Genetic studies have supported both hypotheses
- (C) Both hypotheses cite Africa as an originating location.
- (D) One hypothesis dates the emergence of homo sapiens much earlier than the other.

38. It can be inferred from the passage that

- (A) there is likely to be an end to the debate in the near future
- (B) the debate will interest historians to take part in
- (C) the debate is likely to be less important in future
- (D) there is little likelihood that the debate will die down.

39. According to the passage, the multi-regional evolution model posits far more diverse roots for our kind because

- (A) Evidence from examinations of early modern human skulls has come from a number of different parts of the world.
- (B) DNA from Neandertal appears to support multi-regionalism
- (C) Populations in different regions were linked through genetic and cultural exchange
- (D) This has been supported by fossil evidence

Questions 40-50

Line (5) Although management principles have been implemented since ancient times, most management scholars trace the beginning of modern management thought back to the early 1900s, beginning with the pioneering work of Frederick Taylor (1856-1915) Taylor was the first person to study work scientifically. He is most famous for introducing techniques of time and motion study, differential piece rate systems, and for systematically specializing the work of operating employees and managers. Along with other pioneers such as Frank and Lillian Gilbreth, Taylor set the stage, labeling his philosophy and methods “scientific management”. At that time, his philosophy, which was concerned with productivity, but which was often misinterpreted as promoting worker interests at the expense of management, was in marked contrast to the prevailing industrial norms of worker exploitation.

(10) The time and motion study concepts were popularized by Frank and Lillian Gilbreth. The Gilbreths had 12 children. By analyzing his children’s dishwashing and bedmaking chores, this pioneer efficiency expert, Frank Gilbreth, hit on principles whereby workers could eliminate waste motion. He was memorialized by two of his children in their 1949 book called “Cheaper by the Dozen”.

The Gilbreth methods included using stop watches to time worker movements and special tools (cameras and special clocks) to monitor and study worker performance, and also involved identification of “therbligs” (Gilbreth spelled backwards) – basic motions used in production jobs. Many of these motions and accompanying times have been used to determine how long it should take a skilled worker to perform a given job. In this way an industrial engineer can get a handle on the approximate time it should take to produce a product or provide a service. However, use of work analysis in this way is unlikely to lead to useful results unless all five work dimensions are considered: physical, psychological, social, cultural, and power.

(15)

(20)

40. What is the passage primarily about?

- (A) The limitations of pioneering studies in understanding human behavior
- (B) How time and motion studies were first developed
- (C) The first applications of a scientific approach to understanding human behavior
- (D) The beginnings of modern management theory

41. The word “ which” in line 9 refers to

- (A) scientific management
- (B) philosophy
- (C) productivity
- (D) time and motion study

42. It can be inferred from the first paragraph that

- (A) workers welcomed the application of scientific management
- (B) Talor’s philosophy is different from the industrial norms

(C) by the early 1900s science had reached a stage where it could be applied to the workplace

(D) workers were no longer exploited after the introduction of scientific management.

43. The word “prevailing” in line 10 is closest in meaning to

(A) predominant (B) broadly accepted (C) prevalent (D) common

44. According to the passage, Frank Gilbreth discovered how workers could eliminate waste motion by

(A) using special tools such as cameras and clocks

(B) using stop watches

(C) applying scientific management principles

(D) watching his children do their chores

45. The basic motions used in production jobs were given which one of following names by Frank Gilbreth?

(A) dimensions (B) gilbreths (C) therbligs (D) monitors

46. According to the passage, the time it takes a skilled worker to perform the motion of a given job can be measured by using:

(A) stop watches

(B) all five work dimensions

(C) special tools

(D) therbligs

47. The word “motions” in line 20 is closest in meaning to

(A) stop watches
special tools

(B) habits

(C) actions

(D)

48. Where in the passage does the author comment that the principles of scientific management were often misunderstood?

(A) Lines 1-5
Lines 16-20

(B) Lines 6-10

(C) Lines 11-15

(D)

49. The word “ dimensions” in line 24 is closest in meaning to

- (A) sizes (B) extents (C) aspects (D)
standards

50. All of the following are true except

- (A) scientific management was concerned with productivity.
(B) the beginnings of modern management thought commenced in the 19th century.
(C) Frank Gilbreth’s fame was enhanced by two of his children writing a book.
(D) analyzing work to increase productivity is not likely to be useful unless all of the dimensions are considered.

ANSWER SHEET – READING COMPREHENSION TEST

No	A	B	C	D
1				
2				
3				
4				
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6				
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9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

No	A	B	C	D
21				
22				
23				
24				
25				
26				
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28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				

No	A	B	C	D
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				

ANSWER KEY

CBBDC BDCAA DBBCC
 BADBB ADCDC
 CDABB CBDAB
 CADCD BBADC
 DCBCB

APPENDIX C

Result of Normality Test

Tests of Normality

	Kolmogorov-Smirnov ^a		
	Statistic	Df	Sig.
Critical Thinking	.070	108	.296*

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov ^a		
	Statistic	Df	Sig.
Reading_Comprehension	.068	108	.316*

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

APPENDIX F

Correlation between Students' Critical Thinking and Their Reading Comprehension

		CT	RCT
CT	Pearson Correlation	1	0.226*
	Sig. (2-tailed)		0.020
	N	108	106
RCT	Pearson Correlation	.226*	1
	Sig. (2-tailed)	.020	
	N	106	106

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