

**FEATURES OF CRITICAL THINKING
ON STUDENTS' ENGLISH ESSAY
BASED ON BLOOM'S TAXONOMY THEORY**

THESIS

Submitted in partial fulfillment of the requirement for the degree of Sarjana
Pendidikan (S.Pd) in Teaching English



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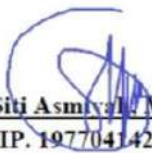
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ABSTRACT

Indah Lestari, Umi (2020). *Features of Critical Thinking on Students' English Essay Based on Bloom's Taxonomy Theory: A Case Study at English Language Education Department in UIN Sunan Ampel Surabaya.* A thesis. English Teacher Education Department, Faculty of Language and Teacher Training, UIN Sunan Ampel Surabaya. Advisor I: Dr. Siti Asmiyah, M. TESOL. Advisor II: Hilda Izzati Madjid, M.A

Key Words: *Writing Essay, Bloom Taxonomy, Features of Critical Thinking, Argumentative Essay*

Critical thinking is crucial in particular for university students to enable them to write academically critical works such as an essay. The purpose of this research is to explore the features of critical thinking on students' English essay writing based on Bloom's Taxonomy which has been revised in the cognitive process domain. This research was conducted using document analysis. To obtain data, this research analyzed 12 essays developed by students from Written English class. The findings showed that there were 9 out of 10 sub cognitive problems developed by the students. The features covered are executing, implementing, differentiating, organizing, attributing, checking, critiquing, generating, and producing levels. One type of sub cognitive level was not used in their essays that is planning level. Features of critical thinking that often appeared in the essays were the analyzing level, and especially at the organizing level. The features of critical thinking found were not only in the body of the paragraph but also in the introduction and conclusion paragraphs. These findings imply that the essays made by the university students have reached the level of critical thinking based on Bloom's Taxonomy theory. This is evidenced by the organizing features that frequently appear in each paragraph of their essays, such as it, that, these, there and others that are aligned with critical thinking elements based on the theory. So, the feature appears in the form of simple expressions, phrases, or language features.

ABSTRAK

Indah Lestari, Umi (2020). *Ciri-ciri Berpikir Kritis pada Essay Bahasa Inggris Siswa Berdasarkan Teori Bloom Taxonomy: Studi Kasus pada Jurusan Pendidikan Bahasa Inggris di UIN Sunan Ampel Surabaya.* Skripsi. Jurusan Pendidikan Bahasa Inggris, Fakultas Bahasa dan Pelatihan Guru, UIN Sunan Ampel Surabaya. Pembimbing I: Dr. Siti Asmiyah, M. TESOL. Pembimbing II: Hilda Izzati Madjid, M.A

Kata kunci: *Penulisan Essay, Bloom Taxonomy, Ciri-ciri Berpikir Kritis, Essay Argumentatif*

Berpikir kritis sangat penting khususnya bagi mahasiswa untuk memungkinkan mereka menulis karya akademis penting seperti esai. Tujuan dari penelitian ini adalah untuk mengeksplorasi ciri-ciri pemikiran kritis pada penulisan esai bahasa Inggris siswa berdasarkan Bloom Taxonomy yang telah direvisi dalam domain proses kognitif. Penelitian ini dilakukan dengan menggunakan analisis dokumen. Untuk mendapatkan data, penelitian ini menganalisis 12 esai yang dikembangkan oleh siswa dari kelas Written English. Temuan menunjukkan bahwa terdapat 9 dari 10 sub proses kognitif yang menunjukkan ciri – ciri berpikir kritis yang terdapat dalam esai bahasa Inggris yang dikembangkan oleh siswa. Ciri- ciri tersebut mencakup tingkat pelaksanaan, penerapan, pembedaan, pengorganisasian, menghasilkan, pengecekan, pemberian kritik, pengembangan, dan produksi tulisan. Ada satu jenis tingkat sub proses kognitif yang tidak digunakan dalam esai bahasa Inggris mereka, yaitu tingkat perencanaan. Ciri-ciri berpikir kritis yang sering muncul dalam esai adalah pada tingkat analisis, terutama pada tingkat pengorganisasian. Ciri-ciri berpikir kritis tidak hanya terletak di tubuh paragraf, tetapi juga dalam paragraf pengantar dan kesimpulan. Penemuan ini menyiratkan bahwa essay yang dibuat oleh mahasiswa universitas telah mencapai tingkat berpikir kritis berdasarkan teori Bloom Taxonomy. Hal ini dibuktikan dengan ciri-ciri pengorganisasian yang sering muncul dalam setiap paragraf, seperti itu, itu, ini, sana dan lain-lain yang kemudian diselaraskan dengan unsur berpikir kritis yang berdasarkan teori. Jadi, ciri itu muncul dalam bentuk ungkapan sederhana, frasa, atau ciri bahasa.

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LIST OF ABBREVIATION

1. BE : Basic Essay
2. SE : Standard Essay
3. HE : High Essay



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CHAPTER I INTRODUCTION

This chapter presents an overview of the research basis. The introduction section consists of several parts, including background, research question, and object of study, significance of study, scope and limitation, and definition of key terms. Some of these parts will be discussed below.

A. Background of Study

Critical thinking must be assessed, not only on what students have remembered about the material during the learning process, but it can also be seen from how they build aspects of knowledge they have. One of the ways to know the large amount of students' knowledge is how they think critically in their written essay. In writing an essay, an author also needs the ability to think critically in developing a written essay in quality argument. Previously, students learned a lot about how to write paragraphs at senior high school level. At the next level, students learned about how to arrange several paragraphs into an essay. Essay consists of several long paragraphs. Essay is a collection of several paragraphs made about a main topic and idea as a center in a paragraph.¹ Basically, the process of writing essays has a correlation with critical thinking in the arguments contained in each sentence. In language testing, some people are interested in knowing about the level of creative, imaginative, or innovative, good knowledge or even strong reasons to support their arguments.² In other words, the essay will be part of an evaluation aimed at testing students in developing writing skills and finding out how students develop critical thinking skills.

¹ Dorothy E Zemach – Lisa A Rumisek, *Academic Writing from Paragraph to Essay*, (Oxford: Macmillan Education, 2005), 56

² Hughes Arthur, *Testing for Language Teachers Second Edition*, (UK: Cambridge University Press, 2003), 85

A central issue at university student level is the students get comments from lecturers to improve their higher critical thinking skills in the essays that they make. This phenomenon often happens to almost all university students who pay less attention to the features of critical thinking, essay structure, and theories that can help them to make good and quality essays. So, the quality of essays made by students is at a low critical thinking level. Another word of critical thinking is deciding or considering. Critical thinking is an activity to think of something with several strong considerations and reasons, and then make a decision to be accepted or rejected. Critical thinking cannot be limited because everyone has different views.³ Strong reasons are needed when thinking critically. It is because reason is the basis of thought.⁴ Therefore, essays cannot be made by the authors who do not have basic knowledge of authorship. When creating essays, the author must understand the methods, strategies, and guidelines on theory of essay writing. There are several effective ways to organize material before writing an essay. The following are several methods that can be used: using outline, pyramid charts, and list.⁵ Essays which are well-arranged according to the theory will produce high quality essays. One of theories in essay writing that can be used by authors is Bloom's Taxonomy. Taxonomy is one way to arrange some information to group things together.⁶ Bloom's Taxonomy theory was shown by Benjamin S. in 1940 as a theory that measures several aspects of education.⁷ The purpose of Bloom's Taxonomy theory is that the teachers need Bloom's Taxonomy theory to support the learning process, especially in achieving learning goals. Bloom's Taxonomy has three domains: cognitive domain (knowledge), affective domain

³ Andrew Beck, *Critical Thinking An Appeal to Reason*, (New York and London: Rout ledge, 2011), 5

⁴ Matthew Allen, *Smart Thinking Skills for Critical Understanding*, (New York: OXFORD Press, 2014), 2

⁵ Lauren Starkey, *How to Write Great Essays*, (New York: Learning express, 2004), 7

⁶ Darwin Charles, *Academic Essay Writing*, (Australia: Charles Darwin University), 9

⁷ Ayu Amaliyah, Thesis, Undergraduate Thesis: "*An Analysis of Multiple Choice Items Made by Teacher Based on Bloom's Revised Taxonomy Theory at Tenth Grade of SMA Negeri 1 Sidoarjo*", (Surabaya: State Islamic University of Sunan Ampel Surabaya, 2018), 2

(attitudes), and psychomotor domains.⁸ The Bloom's Taxonomy structure (cognitive domain) consists of 6 levels. It starts from the lowest level of knowledge to a highest level, namely evaluation. In this study, the theory of Bloom Taxonomy has a role as a reference to find out what elements and expressions students use to show critical thinking in essays written by students.

Based on the problems described, there have been several previous studies conducted by researchers who focused on assessing the level of quality of the type of test in the form of multiple choices made by the teacher in class X Sidoarjo 1 SMA based on Bloom's Taxonomy in cognitive domain. The discovery was conducted by Ayu Amaliyah.⁹ The purpose of the research was to explore the level of learning contained in multiple choice items. The results of the study found that there was a level of understanding on Bloom's Taxonomy theory of cognitive process as the highest level in making tests. The second level found was applying, while the lowest level was remembering the learning process in the form of multiple choice questions.

Previous studies conducted by Shukran Abdul Rahman and Nor Faridah Abdul were about development of creative and critical thinking in the process of learning English literature.¹⁰ Their research focused on the analysis of the relationship between Bloom's Taxonomy theory in the teaching of critical and creative thinking skills to students in Malaysia. The results of the research findings were that the learning of English literature requires critical and creative thinking of the students. The final results of holistic learning contained three abilities (Rational Thinking, Purposeful Thinking, and Effective Relations with Contexts) which must be included in the English syllabus based on taxonomy theory.

⁸ Benjamin S.B, *Taxonomy of educational objectives: Handbook 1: Cognitive Domain*, (New York, NY: David McKay Company, Inc. 1956), 7.

⁹ AyuAmaliyah, Undergraduate Thesis: "An Analysis of Multiple Choice Items Made by Teachers Based on Bloom's Revised Taxonomy Theory at Tenth Grade of Sidoarjo 1 Public High School", (Surabaya: State Islamic University of Sunan Ampel Surabaya, 2018) 4

¹⁰ Shukran Abdul Rahman - Nor Faridah Abdul Manaf, "A Critical Analysis of Bloom's Taxonomy in Teaching Creative and Critical Thinking Skills in Malaysia through English Literature", Malaysia: *Canadian Center of Science and Education*, Vol. 10, No. 9. 2017, 245

The next is previous research conducted by both Siti Zubaidah, AD. Corebima, and Mistiana about assessment format used to assess students' critical thinking through essay tests on classroom learning.¹¹ The research findings explained that the assessment rubric on the Finken and Ennis theory is less effective for use in essay tests on all subjects. The discovery showed that the experiment of assessment rubric can be used easily, practically, and help indicators of critical thinking. The purpose is to update format to be used as assessment of critical thinking in essays applied in the classroom.

Bloom's Taxonomy theory was used as an assessment guide discussed in an international research journal in Turkey. Research conducted by Gökhan Ömer Ulum was about analyzing an EFL book.¹² This study was to investigate cognitive levels of the reading comprehension questions in the EFL course book entitled Q: Skills for Success 4 Reading and Writing. The results of the study explained that based on Bloom Taxonomy's theory, the EFL course book stimulated students in lower cognitive levels. The main cognitive skills developed in this book were the level of remembering and understanding. It was because the low level questions in this book increased the acquisition of factual knowledge and the basis for achieving high cognitive skills.

Some researchers previously tended to analyze the level of test questions, evaluate handbooks, develop critical thinking skills in learning, and develop essay assessment test rubrics using the theory of Bloom's Taxonomy. Based on preliminary study to students of the English Language Education Department, they still have difficulty in showing the features of critical thinking skill in their English essay. Therefore, this study focuses on investigating the features of critical thinking of essays made by students in the scope of university students based on Bloom Taxonomy theory. The theory of Bloom's Taxonomy is needed as a guide in analyzing the features of critical

¹¹ Siti Zubaidah - AD. Corebima – Mistiana, "Assessment of Integrated Critical Thinking Essay Tests", Malang: *Universitas Negeri Malang*, 2015, 200

¹² Ömer Gökhan Ulum, "A Descriptive Content Analysis of the Extent of Bloom's Taxonomy in the Reading Comprehension Questions of the Course Book Q: Skills for Success 4 Reading and Writing", Turkey: *The Qualitative Report*, Volume 21, Number 9, Article 7, 2016, 1674

thinking in the essays that have been made by students at the university level, especially students majoring in English Language Education at State Islamic University of Sunan Ampel Surabaya. The purpose of this investigation is to explore the features of critical thinking on student's essay writing based on Bloom Taxonomy which has been revised in the cognitive process domain. The existence of this research develops the ability to write essays by looking at several criteria at each level or an explanation of Bloom's Taxonomic theory. So, this theory is used as a guide in exploring the features of critical thinking in students' essays.

B. Research Question

Based on the background of the study that has been explained above, the research question is formulated as follows: What are the features of critical thinking on students' English essay writing based on Bloom Taxonomy theory in English Language Education Department at State Islamic University of Sunan Ampel Surabaya?

C. Objectives of the Study

Based on the research questions, the objective of this study is to investigate the features of critical thinking on students' English essay writing based on Bloom Taxonomy theory at the English Language Education Department at State Islamic University of Sunan Ampel Surabaya.

D. Significance of the Study

This research will be theoretically and practically useful for future researchers. The following are the explanations.

1. Theories

Developing theories in critical thinking as a feature of cognitive process level in written argument in English as the Foreign Learning context is very useful for learning activities.

2. Practical

Teachers and students will be able to identify weaknesses and strengths in writing essays made by students regarding the level of critical thinking. Thus, students have an effort to improve at a higher level of critical thinking.

3. Future research

This study can be a reference in solving problems that are common in writing essays. In addition, this research can be a guide for the future research on writing essays with other aspects. An example of a topic that might be used in the future research is an analysis of the level of argument quality contained in students' essays.

E. Scope and Limitation

The scope of this study is to analyze documents of learning outcomes in the classroom. Document of learning outcome analyzed is in the form of essays made by students. This study focuses on analyzing the features of critical thinking or high-level thinking skills in essays made by students majoring in English Language Education from the State Islamic University of Sunan Ampel Surabaya. The features of critical thinking that appears in this research are several phrases followed by strong arguments. Many theories explain the ability of critical thinking, this research is limited by using the theory of Bloom's Taxonomy. Bloom's Taxonomy theory used is the cognitive domain which includes remembering, understanding, applying, analyzing, evaluating, and creating. However, it will be narrowed down to the level of critical thinking which includes applying, analyzing, evaluating, and creating. The theory is in accordance with the scope of the research that discusses the features of critical thinking. Bloom's Taxonomy theory is a guideline in thinking levels from low to high level thinking. The levels in Bloom taxonomy; however, are not used to measure or assess the level of students' critical thinking but as the guideline to look at what elements of critical thinking are expressions used in the students' essay feature. In other words, the levels are

used as the starting points to investigate the features of critical thinking in the essay.

The subject of this research is student' essays from 4 classes in Written English courses in the third semester of students majoring in English Language Education at State Islamic University of Sunan Ampel Surabaya. This research will be taken in the 2019/2020 academic year. This study needs 3 documents from each of the 4 classes. The number of documents are 12 essays made by students to be analyzed using this method of analysis. The document analyzed is the final test results at the end of learning in written English class. The type of essay analyzed is argumentative essays written by students who have just passed the Written English course.

F. Definition of Key Terms

To avoid misunderstanding and gain the same perception, this section presents definitions of the following key terms.

1. Writing an essay is the process of gathering several paragraphs made about a main topic and idea as a center in a paragraph.¹³ In this study, writing essays is defined as a process of developing paragraphs related to a particular topic that contains main ideas supported by supporting sentences in the form of critical arguments written in English by the students of the English Language Education Department at State Islamic University of Sunan Ampel Surabaya.
2. Features of critical thinking are conducting specific research, rejecting and accepting new information, asking questions actively, considering problems, explaining strong reasons, and being open to other people's thought processes.¹⁴ In this study, it is defined as the expressions of attributes showing the ability to think at a complex level through the process of analysis and evaluation in an essay that appears in the form of

¹³ Dorothy E Zemach – Lisa A Rumisek, *Academic Writing from Paragraph to Essay*, (Oxford: Macmillan Education, 2005), 56

¹⁴ Murat KARAKOÇ, "The Significance of Critical Thinking Ability in terms of Education", Turkey: *International Journal of Humanities and Social Science*, Vol. 6, No. 7, July 2016, 81

an argument which consists of several phrases, language features, or simple expressions. The expressions in the sentences show elements of conducting research, rejecting and accepting new information, asking questions actively, considering problems, explaining strong reasons, and being open to other people's thoughts followed by strong arguments expressed in the form of an English essay.

3. Bloom's Taxonomy is a collection of work plans or models to group and achieve learning goals that are arranged in a systematic, logical, clear and structured manner.¹⁵ In this study, Bloom's Taxonomy is the model used to categorize essays made by students from the English education department based on the system, logic, clarity and the structure of critical thinking skills proposed by Bloom.
4. An argumentative essay is an essay in which you agree or disagree with an issue, using reason to support your opinion.¹⁶ While in this study, an argumentative essay is a set of paragraphs that contain ideas, point of view, and opinions about agreeing and disagreeing to a problem followed by supporting reasons as a form of critical thinking developed by the English Language Education Department student.

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¹⁵ Lorin W. Anderson – David Kratwohl, et.al, *A Taxonomy for, Learning, Teaching and Assessing. A Revision of Bloom's Taxonomy of Educational Objective*, (New Work: Addison Wesley Longman, 2001), 4

¹⁶ Alice Oshima - Ann Hogue, *Writing Academic English Fourth Edition*, (New York; Pearson Longman, 2006) 142

CHAPTER II

LITERATURE REVIEW

This chapter explains several theories and literature that relate to the formulation of the problems in research to show the appropriate basics of knowledge. The theoretical framework contains several subheadings. Those are essay writing, Bloom's Taxonomy, critical thinking theory, and features of critical thinking. In this chapter, the features of critical thinking explain phrases, language features, and simple expressions contained in sentences which indicate the level of critical thinking based on Bloom's taxonomy theory in the essay. The previous studies are also related to this study, which is presented below.

A. Theoretical Framework

Basically, writing an essay can improve critical thinking skills. That is because the essay is subjective and argumentative in its delivery. Essays are also used as a tool used by teachers to assess the level of critical thinking about a problem based on the student's point of view. Students can write an essay freely to express an argument they have. However, good essays have a good structure to make sense for the reader.

1. Essay Writing

a. Definition of essay writing

Essay is a collection of several paragraphs made about a main topic and idea as a center in a paragraph.¹⁷ However, essays cannot only be written in one paragraph, it is because the essay topic is too difficult. So, the writer must divide the topic into all paragraphs. Each paragraph gets one main point.¹⁸ In the process of formulating a topic, the author must also make a title that is in accordance with the topic and content of an

¹⁷Dorothy E Zemach – Lisa A Rumisek, *Academic Writing from Paragraph to Essay*, (Oxford: Macmillan education, 2005), 56

¹⁸ Alice Oshima, *Writing Academic English Third Edition*, (Addison Wesley Longman, 2008), 100

essay. The words used in writing a title must be written briefly and strongly, and have meaning. The function of a title is an explanation to the reader about what will be focused in the essay.¹⁹ An essay must have at least three paragraphs, but a five-paragraph essay is common length for academic writing.

b. Structure of essay writing

1) Introductory paragraph

The most difficult thing is to write the first paragraph. The contents of the first paragraph in an essay are general sentences, but not far from the topic to be discussed, such as introduction. Therefore, the first paragraph is usually called an introductory paragraph.²⁰ The characteristics that usually appear in the introduction paragraph are: making the reader interested, containing the general description of the essay, explaining the basis / background of the topic, generally containing five to ten sentences, and showing the important points of the essay (thesis statement).²¹ Thesis statement is usually at the end of the introductory paragraph. The author must pay attention to each sentence contained in the paragraph. So, it still has a relationship with the next paragraph.

2) Body paragraph

After the introduction paragraph, essays have the body paragraph. There is more than one paragraph in the body paragraph. Body paragraph becomes the longest part in the essay, which contains sentences that support the main ideas supported by strong arguments in accordance with the facts that occur in the field.²² Therefore, the

¹⁹ Chris Sowton, *50 Steps to Improve your Academic Writing Study Book*, (UK: Garnet Education, 2012), 56

²⁰ Cynthia A. Boardman – Jia Frydenberg, *Writing to Communicate Paragraphs and Essays Third Edition*, (United States of America: Pearson Longman, 2008), 78

²¹ Dorothy E Zemach – Lisa A Rumisek, *Academic Writing from Paragraph to Essay*, (Oxford: Macmillan education, 2005), 71

²² Alice Oshima, *Writing Academic English Third Edition*, (Addison Wesley Longman, 2008), 101

author must make an outline in compiling the paragraph. The body paragraph must contain topics and supporting sentences. It is usually in the middle of the introduction and conclusion paragraph. In the middle of the paragraph, it is about the explanation in the form of several critical arguments from the problem explained in the introduction paragraph. Giving arguments in essays must be followed by a reason or a real example. It will support the arguments given by the author to the reader.

3) Conclusion paragraph

Conclusion paragraphs are at the last paragraph in essay writing.²³ The function of the conclusion paragraph is needed. The contents of the conclusion paragraph are summaries of the main points contained in the previous paragraphs and final reviews on the topic of the problem based on the facts gathered.²⁴ Commenting on the subject in the conclusion paragraph will make the reader indirectly relate it to their real life. In this section the author must draw an interesting conclusion. An interesting conclusion is about giving a logical solution and a final assessment in the form of an author's critical thinking on a problem that is appropriate to the level of cognitive process.

c. Essay quality

1) Basic quality essay

Essays which have the basic qualities usually tend to provide biased evidence. In addition, the author only talks from one point of view, without looking at the other points of view. Basic essay quality creates a conclusion that is less relevant to the topic of the problem being taken. In general, basic quality essays show closed thinking and are less critical in giving opinions. Apart from that, the quotations

²³ Cynthia A. Boardman – Jia Frydenberg, *Writing to Communicate Paragraphs and Essays Third Edition*, (United States of America: Pearson Longman, 2008), 88

²⁴ Alice Oshima, *Writing Academic English Third Edition*, (Addison Wesley Longman, 2008), 107

contained in this essay come from inaccurate data. Writing ideas lacks coherence between sentences and is less structured.²⁵ In general, the basic quality essays have less ratings.

2) Standard quality essay

An essay of standard quality usually has characteristics such as including accurate evidence, providing pro and con arguments according to the topic, and making an evaluation that comes from another more accurate point of view. In addition, a standard quality essay contains material sourced from accurate and precise data. The ideas contained in standard quality essays are listed coherently, clearly, and systematically.²⁶ The quality of this essay has a rating above that of the basic quality essay.

3) High quality essay

There is some accurate evidence contained in one of the characteristics of a high quality essay. Apart from the evidence, arguments that are given strongly to support the author's statements are also characteristics of high quality essays. The quality of essays at this level cites several appropriate and accurate sources to be used as supporting data. In addition, some ideas in high quality essays are written in a clear, structured, coherent, and correct way. This essay at high quality has the special characteristic of providing a critical evaluation from another point of view.²⁷ Essays at this level have characteristics not far from standard essay quality. However, the most prominent in the high-quality essay is a critical election argument. So that, it makes the reader more believe in the content of an essay.

2. Bloom's Taxonomy

An important theory to review as far as critical thinking is concerned is the Bloom's Taxonomy. This theory is reviewed in this work not as the

²⁵ Baden Ian Eunson, "Academic writing: the essay", *Monash University*, 14 July 2014, 224

²⁶ Baden Ian Eunson, 224

²⁷ Baden Ian Eunson, 224

basis to assess or put a student's essay into the levels of the taxonomy. Instead, the taxonomy is used as the starting points or basis of what elements to look at in terms of critical thinking. Bloom's Taxonomy is the basis of a structured thought into a framework of thought.²⁸ Bloom's Taxonomy theory has an important role in supporting the world of education, especially in achieving learning objectives. Benjamin S. Bloom discovered the original Bloom's Taxonomy theory in 1949. After considering the progress of the theory, Bloom's Taxonomy appeared on the cognitive domain in 1956.²⁹ Then, the theory developed into several domains. Each domain has different roles, impacts, and purposes when applied during the learning process. Bloom's Taxonomy theory has a structure consisting of several levels. The purpose of the theory is used as a guide in designing learning objectives and evaluating learning outcomes to measure students' abilities easily. Bloom's Taxonomy is an effective medium in evaluating the basis of learning objectives because it requires levels that are described in detail in explaining learning objectives that are difficult to obtain.³⁰ It is because Bloom's Taxonomy consists of several levels, where each level has different provisions. Therefore, evaluating must be detailed based on Bloom Taxonomy.

Basically, Bloom's Taxonomy has three domains. The first is cognitive domain (knowledge). The cognitive domain has a relationship with the purpose of learning about recall or recognition of knowledge and increased intellectual skills and abilities. Cognitive domain has a crucial role as a guideline in improving the quality of a test in learning. Affective domain is the second part of Bloom's Taxonomy theory. Affective domain is about learning goals that explain changes in attitude and behavior, nature,

²⁸ Faisal, "Mengintegrasikan Revisi Taksonomi Bloom Kedalam Pembelajaran Biologi", *Jurnal Sainsmat*, Vol. IV, No. 2 ISSN 2086-6755, 2015, 103

²⁹ David R. Krathwohl. "Revising Bloom's Taxonomy". *Theory into Practice*, Volume 41, Number 4, Autumn, 2002, 212

³⁰ Robert T. Marzano – John S. Kendall, *The New Taxonomy of Educational Objectives (Second Edition)*, (California: Corwin Press, 2007), 3

interests, values, and increased appreciation for others inside or outside the classroom. In this domain, the teacher does not clearly apply it during the learning process. The last domain is the psychomotor domain or manipulative or motor-skill that develops student psychology to keep it balanced during the learning process. The existence of this domain is not frequent.³¹ Each domain is divided into several categories and subcategories. Each category and subcategory has a systematic sequence, starting from the simple level to the complex level.

Each category can be used for a reference to the level of learning or evaluation. It focuses on the cognitive domain. The categories in the cognitive domain are knowledge, comprehension, application, analysis, synthesis and evaluation. The following is a figure 2.1 of the original Bloom's Taxonomy theory in the cognitive process domain.

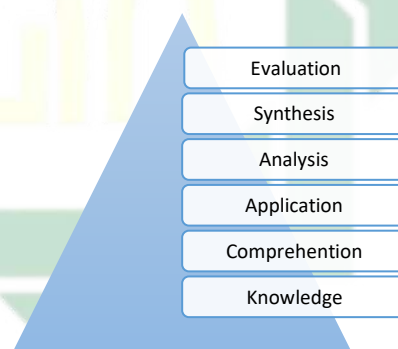


Figure 2.1 Old Bloom's Taxonomy³²

Based on figure 2.1, the first level of original Bloom's Taxonomy theory is *knowledge*, which means that students get new information and knowledge to be stored and then recalled in long-term memory. Further, the students use the information retrieved and try to *understand* the information obtained. After the students are able to understand, they can *apply* the information and knowledge to a particular situation. The development of students' level of thinking then divides the information or knowledge into

³¹ A Committee of College and University Examiners, *TAXONOMY OF EDUCATIONAL OBJECTIVES The Classification of Educational Goals*, (London: Longman, 1956), 7

³² Robert T. Marzano – John S. Kendall, *The New Taxonom of Educational Objectives (Second Edition)*, (California: Corwin Press, 2007), 21

several sections according to the group at the level of *analysis*. After dividing some of the information available, the students are looking for ways to gather information and knowledge into a new unity at the level of *synthesis*. The students can assess and *evaluate* their own work to improve the quality of their learning. According to B. Bloom from Bloom's Taxonomy theory, the ability to think at a low level is at the level of knowledge and understanding. While the level of application, analysis, evaluation, and synthesis is included in the ability to think at a higher level.³³ At the higher level, it is also called the level of critical thinking, where the level requires in-depth thinking. However, if low level is combined with higher level, it will form a perfect assessment.

However, some researchers in the field of education and psychology changed Bloom's Taxonomy theory. These changes help teachers to assess and evaluate the students' thinking level after the learning process. It is because in essence the level of thinking is divided into two, namely high and low-level thinking. Some changes made by David R. Krathwohl to the Bloom's Taxonomy theory framework were made in 2001 called revised Bloom's Taxonomy.³⁴ Figure 2.2 below illustrates the differences between the old Bloom's Taxonomy and the revised version.

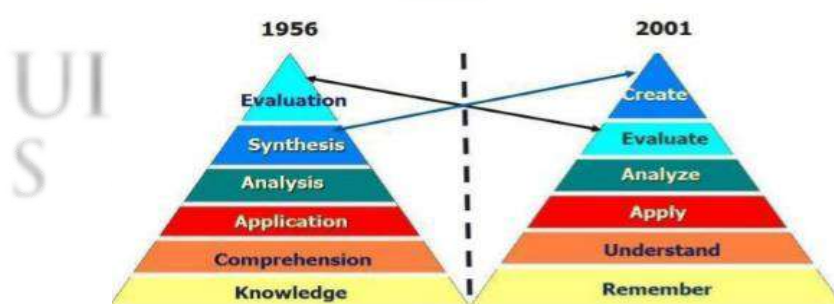


Figure 2.2 Changes in Bloom's Taxonomy³⁵

³³ Olena Korzh, PhD, "Bloom's Taxonomy and Its Role in Academic Writing and Reading Skills Training at English Classes", Ukraine, *Vasyl' Stus Donetsk National University*, 2017, 112

³⁴ Lorin W. Anderson-David Krathwohl, et.al, *A Taxonomy for, Learning, Teaching and Assessing. A Revision of Bloom's Taxonomy of Educational Objective*, (New Work: Addison Wesley Longman, 2001), 7

³⁵ Lorin W. Anderson-David Krathwohl, et.al, 286

Based on Figure 2.2, the most obvious change in the original Bloom's Taxonomy and revised theory is the change of six categories in form of nouns into verbs. It is explained because Bloom's Taxonomy revised is more focused on helping teachers to achieve the learning objectives related to the curriculum. Automatically, sub categories at each level also change. In addition, in the structural changes, *knowledge* becomes *remembering* and *synthesis* becomes *creating*.

The following are 6 levels of cognitive process according to the revised Bloom's Taxonomy theory. This study chooses to use the revised Bloom Taxonomy theory. The theory is in accordance with the research subject in analyzing the features of critical thinking. The first or basic level process is *remembering*. Remembering is an activity recalling the knowledge and information that have been learned in a long period of time. Where knowledge and information will be processed in the brain. The second level is called *understanding*. Understanding regulates the meaning of instructional information which can be in the form of text, sound, graphics, or images so that it is acceptable to the brain. After being acceptable to the brain, information and knowledge will be processed at the third level which is the application *level*. The Applying is to do something according to the procedure in sequence in a particular situation. After designing the sequence, information and knowledge will be applied in a more real manner. Further, the fourth level is *analyzing*. Analyzing is an activity that aims to divide the material into several parts and regulate how the parts are interrelated to form a structured unit with a specific purpose. Analyzing becomes an important process for observing information and knowledge that has been slightly developed to be ready for processing at a next stage. The fifth level is *evaluating*. Evaluating is giving an assessment of something in accordance with the agreed upon standards and criteria. After making an evaluation, the last level is *creating*. Creating is to combine several components to form coherent or functional, rearrange components

into a new format, and to create new products.³⁶ If the students are able to pass the six levels above, it means that the students have carried out the process of thinking at a high level.

Revised Bloom's Taxonomy is used as a guide to examine or evaluate the writing of essays made by the students. Several levels in the theory are used to investigate the level of quality of student essays through the sentences used.³⁷ At the 6 levels, there are 19 cognitive processes. This sub cognitive process is used to determine what elements appear in critical thinking, then analyze the expressions that appear in critical thinking. However, below is the explanation of the 10 cognitive processes included in the higher order thinking category needed by university level students in analyzing essays.

a. Apply

Apply level is the third level of cognitive process related to students' ability to use knowledge of procedures in doing exercises and solving problems. Cognitive processes at this level are divided into two namely *executing* and *implementing*.³⁸ When students are told to solve problems using known procedures, they will develop them. However, if the students get assignments or problems with new situations and do not know what procedures are suitable, then students must find and update the knowledge of the procedure.

1) Executing

When students are able to use procedural knowledge for familiar assignments, there happens the execution process.³⁹ A student does something by making an action based on steps that are fixed. For example, when a student makes an essay, students must prepare a draft

³⁶ Lorin W. Anderson – David Kratwohl, et.al, *A Taxonomy for, Learning, Teaching and Assessing. A Revision of Bloom's Taxonomy of Educational Objective*, (New Work: Addison Wesley Longman, 2001), 67

³⁷ Charles Darwin, *Academic Essay Writing*, (Australia: Charles Darwin University, 2003), 9

³⁸ Lorin W. Anderson – David Kratwohl, et.al, 77

³⁹ Lorin W. Anderson – David Kratwohl, et.al, 77

in accordance with the instructions to make it easier. Alternative words that correspond to executing is *Carrying out*. The following are simple expressions that will appear in an essay that show executing ability;

*“First(ly), second(ly), third(ly); to begin/start with; lastly/finally; last but not least; ultimately; first and foremost; another; then; afterwards; first and most importantly; in the first/second place”.*⁴⁰

2) Implementing

The implementation process is applied when a student completes an unknown task and problem by selecting and using the appropriate procedure to be developed.⁴¹ Students are given problems that were not previously known. Then, students must understand the problems faced carefully to design and develop a procedure. The expressions that usually appear in an essay to show the ability implementing include;

*“Next; before; during; after; since; while working on the project; to begin with; once; till/ until; meanwhile.”*⁴²

b. Analyze

Analysis is a cognitive process that is related to the activity of breaking down, dividing, and differentiating materials into parts according to certain criteria to find relationships between one and another.⁴³ Cognitive processes at this level are divided into *differentiating, organizing, and attributing*. The purpose of analyzing is to distinguish between facts, opinions, and phenomena, find ideas related to one another, and arrange

⁴⁰ Vivien Perutz, *A Helpful Guide to Essay Writing!*, (Cambridge: Student Services, 2010), 13

⁴¹ Lorin W. Anderson – David Kratwohl, et.al, *A Taxonomy for, Learning, Teaching and Assessing. A Revision of Bloom's Taxonomy of Educational Objective*, (New Work: Addison Wesley Longman, 2001), 78

⁴² The Learning Centre, “Linking and Reporting Words”, *Jamescoook University Australia*, (https://www.jcu.edu.au/_data/assets/pdf_file/0003/218631/Linking_reporting_words.pdf, accessed on March 29th, 2019)

⁴³ Lorin W. Anderson - David Kratwohl, et.al, 79

a particular structure. Analysis is the initial way of connecting at the next level, namely evaluating and creating.

1) Differentiating

Differentiation occurs when students are able to distinguish between important and unimportant information and correlations between information that are not interconnected. Differentiating is an activity to distinguish the part of the whole material about the importance and correlation with one another. Alternative words that correspond to differentiating are *discriminating*, *selecting*, *distinguishing*, and *focusing*.⁴⁴ Differentiating is very different from comparing. It is because comparing has a broader context and more detail. The following are expressions that can be used to show differentiating ability;

*“However; on the other hand; in contrast; alternatively; on the contrary; conversely; in comparison; rather; in fact; another possibility; better/worse still; but; despite this; notwithstanding; in spite of; nevertheless; for all that; yet; all the same; instead; although.”*⁴⁵

2) Organizing

Organizing occurs when students are able to investigate the relationship between one element and another interrelated into one coherent structure.⁴⁶ Organization focuses on drafting the structure in accordance with a specific purpose. An alternative word for organizers is *finding coherence*. The teacher can ask students to make a paragraph with sentences that have a related pattern into a complete structure. The following are possible expressions of organizing ability;

⁴⁴ Lorin W. Anderson - David Kratwohl, et.al, *A Taxonomy for, Learning, Teaching and Assessing. A Revision of Bloom's Taxonomy of Educational Objective*, (New York: Addison Wesley Longman, 2001), 80

⁴⁵ Vivien Perutz, *A Helpful Guide to Essay Writing!*, (Cambridge: Student Services, 2010), 11

⁴⁶ Lorin W. Anderson-David Kratwohl, et.al, 81

- a) “*I, me, you, we, us, him, she, he, her, they, them, and it / my, you, your, his, her, her, their, their, its / mine, his, theirs*” (as a reference in the category of people),
 - b) “*this, that, these, those; here, there, now*” (as reference in location and distance instructions),
 - c) “*one/ones and some*” (as reference in the replacement of an element in a text),
 - d) “*and, but, for, or, neither, nor, not only, so, yet*” (as reference in conjunction).⁴⁷
- 3) Attributing

A student who is able to provide points of view, values, intentions, and opinions on a problem that can underlie a communication is one of the examples showing the attributing activity.⁴⁸ Viewpoint provided is not only in the form of a text, but also in oral form. Attributing is an activity that requires students to develop and choose a response. Tasks that can be given by the teacher to the students are in the form of preparing a written or oral material, and then the students must identify and describe the perspective of the author. An alternative word for attributing is *deconstructing*. Here are some expressions that generally indicate attributing ability;

*“X suggests / argues / states / believes / concludes / proposes that...; x expresses / holds the view that...; x draws attention to...; x describes how....; x refers to...; according to x; there is a view / theory / argument that....; one view, expressed by x is that...; as stated / suggested / argued / proposed by x.....”*⁴⁹

⁴⁷ Ayub - Seken K – Suarnajaya W, “An Analysis of the Cohesion and Coherence of Students’ English Writing at the Second Grade of SMAN 1 Labuapi West Lombok”, Singaraja: *e-Journal Pascasarjana Universitas Pendidikan Ganesha*, Volume 1, 2013, 3

⁴⁸ Lorin W. Anderson – David Kratwohl, et.al, *A Taxonomy for, Learning, Teaching and Assessing. A Revision of Bloom’s Taxonomy of Educational Objective*, (New York: Addison Wesley Longman, 2001), 82

⁴⁹ Vivien Perutz, *A Helpful Guide to Essay Writing!*, (Cambridge: Student Services, 2010), 19

c. Evaluate

Evaluation is the level of cognitive process that focuses on giving an assessment of things based on the criteria and standards that have been predetermined.⁵⁰ Evaluation is needed to make an assessment of an object or problem regarding quality, effectiveness, efficiency, productivity, and consistency. Standards are made to determine criteria. Cognitive processes at this level are *checking* and *criticizing*. One thing to note is that not all assessments are called evaluations. It is because evaluation must have clear criteria and standards.

1) Checking

If students are able to carry out activities to re-examine internal problems or errors in an operation or product, indirectly the students can apply checking skills.⁵¹ Alternative words to checking are *testing*, *detecting*, *monitoring*, and *coordinating*. The purpose of checking is to double check a problem to find a solution and do it actually. The teacher can give an assignment to the students to investigate a person's argument in an essay. Here are words that might appear in essays on checking ability;

- a) *"This is supported by x....; this reflects the view / theory / suggestion of x.....; x accepts / supports / agrees with / concurs with this view / suggestion / theory....; a similar view is held by x...."* (Agree with the statement),
- b) *"This conflicts / contrasts with / is contrary to the view held by x...; this is not accepted by / has been challenged by x.....; the opposite / a conflicting view is expressed by x....."* (Disagree with the statement).⁵²

⁵⁰ Lorin W. Anderson-David Kratwohl, et.al, *A Taxonomy for, Learning, Teaching and Assessing. A Revision of Bloom's Taxonomy of Educational Objective*, (New Work: Addison Wesley Longman, 2001), 83

⁵¹ Lorin W. Anderson – David Kratwohl, et.al., 83

⁵² Vivien Perutz, *A Helpful Guide to Essay Writing!*, (Cambridge: Student Services, 2010), 19

2) Criticizing

Criticizing is an activity of giving an assessment of something based on external criteria and standards that have not been known before.⁵³ Assessment given to the object can be both positive and negative. Alternative word for criticizing is judging. Criticizing is the result of a critical thinking process. The purpose of giving criticism is to improve the quality of a product. The teacher can give assignments to students about the problem that is happening, then students can give a positive or negative assessment written in the form of argumentative essays. Here are words used to express the ability of criticizing;

*“It appears to me that the author...; in my opinion, the article...; the concept presented by the author is intriguing/innovative in that it...; the arguments the author presented are inadequately supported...; the article accurately/inaccurately portrays/presents...”*⁵⁴

d. Creating

Creating is the highest and most difficult level in the cognitive process of Bloom's Taxonomy theory. Creating is believed as an ability to make a product by rearranging some of the elements into a new form, a structure that previously did not exist.⁵⁵ Creating focuses on making something new, it requires students' knowledge, experience and creativity. Creating activities relate to creativity and ideas owned by a student. Creativity is a special skill in creating new ideas, ideas or products. A real example done by the teacher in the class to apply the cognitive process of creating is to ask students to write an essay in a

⁵³ Lorin W. Anderson-David Kratwohl, et.al, *A Taxonomy for, Learning, Teaching and Assessing. A Revision of Bloom's Taxonomy of Educational Objective*, (New Work: Addison Wesley Longman, 2001), 84

⁵⁴Dr. Elaine Khoo, “Expressions Showing Evaluation Useful Sentence Stems for Summary and Critical Review”, *The Writing Centre University of Toronto*, (<https://www.utoronto.ca/twc/sites/utoronto.ca/twc/files/resource-files/xSentenceStems.pdf>, accessed on March 30th, 2019)

⁵⁵ Lorin W. Anderson-David Kratwohl, et.al, 84

structured arrangement. At this level, it is divided into *generating*, *planning*, and *producing*.

1) Generating

Generating is an activity of students in manifesting a solution of problems in the form of alternatives or possibilities within certain criteria. Alternative word for generating is *hypothesizing*.⁵⁶ Generating has a relationship with creativity. It is because in hypothesizing, it will produce several possibilities. Activities that can be given by the teacher are given different problems, and then the students are asked to produce a hypothesis. The hypothesis that will be generated will be varied ideas. Here are possible words that often describe generating ability;

*“If it would be possible...; my preference would be for...; x would be ready to...; x my preference would be for...”*⁵⁷

2) Planning

Planning is a student activity that is related to designing and developing a planning solution method aimed at solving problems according to criteria.⁵⁸ Students must design the solutions in detail to solve the problem maximally. This cognitive process is a difficult level. It is because students must design a logical and actual solution to be applied. Teachers can provide activities such as asking students to respond to problems regarding the use of mobile phones in children. Students respond to problems by designing several solutions so that children are not addicted to using mobile phones in the form of essays. Another word for planning is to *design*. Here is a group of expressions that generally indicate planning ability;

⁵⁶ Lorin W. Anderson – David Kratwohl, et.al, *A Taxonomy for, Learning, Teaching and Assessing. A Revision of Bloom's Taxonomy of Educational Objective*, (New Work: Addison Wesley Longman, 2001), 86

⁵⁷ Anthony Elloway, *Grammar for Academic Writing*, (Scotland: English Language Teaching Centre University of Edinburgh, 2013), 36

⁵⁸ Lorin W. Anderson – David Kratwohl, et.al., 87

*“X were prepared.....; x were prepared in accordance with.....; it was designed / planned for.....; x planned / determined to do....”.*⁵⁹

3) Producing

Producing is an activity related to carrying out a design aimed at solving problems with certain specifications.⁶⁰ At this cognitive level, students develop and carry out clearly designed ideas. Another word for producing is *constructing*. Activities that can be given by the teacher are asking students to make an essay with a specific problem topic. Before the students produce an essay, they plan to make a design. It is called the outline of an essay. The following are expressions that appear to show producing ability;

*“So; therefore; accordingly; thus; hence; in conclusion; in short; consequently; to conclude; in brief in all; it might be concluded from this; as a result/ consequence.”*⁶¹

All elements of Bloom Taxonomy such as executing, implementing, differentiating, organizing, attributing, checking, criticizing, creating, generating, planning, and producing as reviewed above will be used to explore the features of critical thinking in students' essays. That is to say that this research analyzed the expressions used in the English essay developed by the students. The research then looked at the features or attributes reflected by the expressions used and related such attributes to the six elements of Bloom's taxonomy. These features reflect the critical thinking which the students put into their English essay.

3. Critical Thinking

Everyone is required to be able to think critically in the era of globalization. Critical thinking has an important role, such as helping to get

⁵⁹ Adrian Wallwork, *English for Writing Research Papers*, (New York: Springer Science, 2011), 283

⁶⁰ Lorin W. Anderson - David Kratwohl, et.al, *A Taxonomy for, Learning, Teaching and Assessing. A Revision of Bloom's Taxonomy of Educational Objective*, (New Work: Addison Wesley Longman, 2001), 87

⁶¹ Vivien Perutz, *A Helpful Guide to Essay Writing!*, (Cambrige: Student Services, 2010), 12

a deeper understanding of the views of others. Whereas in the world of writing, critical thinking helps to develop and defend arguments with supporting facts. It will make the reader convinced by the arguments of the author. Critical thinking is more inclined to something negative that is related to finding a fault. However, critical thinking is the highest ability in the world of education. Critical thinking is an activity to think of something with several strong considerations and reasons, then reach a decision to be accepted or rejected.⁶² Meanwhile in writing, critical thinking is the activity of utilizing information to solve problems, provide relevant facts or arguments, and produce ideas to convince readers. A critical assessment must have a foundation of knowledge and skill to make an assessment, especially for the people who will provide judgment.⁶³ So, critical thinking usually must be followed by clear arguments, and facts in accordance with the problems that occur. As with smart thinking, critical thinking also needs to support the argument. Therefore, the argument is some statement (premise), which aims to demonstrate and support the other statements (conclusions) to convince the reader. While the premise is part of the argument in the form of a statement as evidence and a compelling reason to accept another statement (conclusion).⁶⁴ Critical thinking is the ability of deep thinking processes that aim to facilitate us in understanding what is right and wrong. It becomes the process of analyzing an experience to resolve a situation.⁶⁵ Because critical thinking is the highest level of thinking, the process of critical thinking must go through several stages, starting from the easy stage to the most difficult stage.

⁶² Andrew Beck, *Critical Thinking An Appeal to Reason*, (New York and London: Rout ledge, 2011), 5

⁶³ John Butterworth–Geoff Thwaites, *Thinking Skills Critical Thinking and Problem Solving Second Edition*, (New York: Cambridge University Press 2013) ,7

⁶⁴ Gregory Bassham- Michael Ryan (Eds.), *Critical Thinking A student's Introduction Fourth Edition*, (New York: McGraw-Hill, 2011), 29

⁶⁵ Jennifer Moon, *Critical Thinking An Exploration of Theory and Practice*, (Francis: Rout ledge, 2007), 22

Critical thinking is not just thinking. However, according to Richard W. Paul that critical thinking has several elements namely cognitive strategies - micro and macro skills.⁶⁶ In cognitive-micro-skills strategies, there are several elements which include comparing and separating ideas with clear actions and thinking accurately through the use of vocabulary that shows critical thinking. Other elements are writing important similarities and differences, checking and assessing predictions that are considered true (assumptions), and separating between related and unrelated facts. Also included in that elements are producing logical estimates, conclusions, or interpretations, providing arguments and assessing real evidence and conjecture, identifying the difference in two things (contradiction), and investigating the involvement (implication) and consequences.

Meanwhile, there are more elements in cognitive strategies - macro-skills. Those are editing conclusion level (generalization) and avoiding more simplification, differentiating analog position (changing old knowledge in new context), and building one's perspective (making or exploring a theory, argument, and belief). Other elements are explaining in detail about conclusions, beliefs, and problems, and outlining several criteria for evaluation that aim to describe quality, value, and standards. Besides that, there are other elements which include providing quality assessments to gain trust as a source of information and giving some intensive questions that are important and fundamental. There are also investigating and providing an evaluation of interpretations, theories, beliefs, or arguments, making or providing a solution to a problem, and investigating and providing an assessment of reactions or policies. Some elements also include reading carefully (explaining or analyzing readings), listening carefully with full concentration, and making problem solving relationships with several relevant points of view. The next elements are providing an explanation and consideration of viewpoints, theoretical basis, and beliefs (Socrates

⁶⁶ Andrew Beck, *Critical Thinking An Appeal to Reason*, (New York and London: Rout ledge, 2011), 5

discussion), thinking openly, such as distinguishing points of view, principles, or interpretations, and thinking logically and thoroughly in assessing points of view, principles, and interpretations.⁶⁷ Some elements of cognitive strategies are used for a reference in measuring the level of critical thinking, starting from the simplest level to the complex level.

4. Possible Features of Critical Thinking

Assessing the features of critical thinking of students can be done by analyzing the essays made by the students. The features of critical thinking itself is the ability to think at a complex level through a process of analysis and evaluation in an essay that appears in the form of an argument consisting of a simple expression, phrases, and language features. A good argument is the result of critical thinking which contains one of the elements of critical thinking. The theory of strategies of critical thinking by Richard W. Paul⁶⁸ is aligned with the Bloom's Taxonomy⁶⁹ theory as a reference used to explore the elements and features of critical thinking in student essays. In Bloom's Taxonomy theory, specifically the cognitive domain consists of 6 levels that help in assessing a student's basic thinking including remembering, understanding, applying, analyzing, evaluating, and creating. However, this research focuses on the high level of critical thinking contained in Bloom's Taxonomy theory including the following.

a. Applying

At the applying level, there are several levels of sub cognitive processes which include *executing* and *implementing*. The executing process can be seen from students solving problems according to procedures for familiar assignments. The following are simple expressions that will appear in an essay and show executing ability;

⁶⁷ Andrew Beck, *Critical Thinking An Appeal to Reason*, (New York and London: Routledge, 2011), 4

⁶⁸ Andrew Beck, 5

⁶⁹ Lorin W. Anderson - David Kratwohl, et.al, *A Taxonomy for, Learning, Teaching and Assessing. A Revision of Bloom's Taxonomy of Educational Objective*, (New Work: Addison Wesley Longman, 2001), 67

*“First(ly), second(ly), third(ly); to begin/start with; lastly/ finally; last but not least; ultimately; first and foremost; another; then; next; afterwards; first and most importantly; in the first/second place.”*⁷⁰

While the level of implementation is associated with a process solving unknown problems by choosing appropriate procedures. So, the expressions that usually appear in an essay to show the implementing ability include;

*“Before; during; after; since; while working on the project; to begin with; next; once; till/ until; meanwhile.”*⁷¹

Some of the above expressions will be strengthened by the presence of one cognitive strategy from critical thinking theories i.e. investigating the involvement (implication) and consequences. It will help clarify in the process of analyzing the content of sentences that indicate the implementing level.

b. Analyzing

The next higher level is analysis. The levels of sub cognitive processes contained in the analysis are *differentiating, organizing, and attributing*. The first level is differentiating. Students are able to distinguish between two different things contained in an essay. The following are expressions which can be used to show differentiating ability;

*“However; On the other hand; In contrast; alternatively; On the contrary; conversely; in comparison; rather; in fact; another possibility; better/worse still; but; despite this; notwithstanding; in spite of; nevertheless; for all that; yet; all the same; instead; although.”*⁷²

Cognitive strategies of critical thinking theory will clarify in analyzing the contents of sentences that show different levels. Here are cognitive strategies that show different levels: comparing and separating ideas with

⁷⁰Vivien Perutz, *A Helpful Guide to Essay Writing!*, (Cambridge: Student Services, 2010), 13

⁷¹The Learning Centre, “Linking and Reporting Words”, *James Cook University Australia*, (https://www.jcu.edu.au/data/assets/pdf_file/0003/218631/Linking_reporting_words.pdf, accessed March 29th, 2019)

⁷²Vivien Perutz, 11

clear actions, writing important similarities and differences, separating between related and unrelated facts. Other elements are identifying the difference in two things (contradiction), and thinking openly, such as distinguishing points of view, principles, or interpretations.

The next is the level of organizing. Organizing is the process of combining several elements of communication into one unit. The following are possible expressions of organizing ability;

- a) *“I, me, you, we, us, him, she, he, her, they, them, and it / my, you, your, his, her, her, their, their, its / mine, his, theirs”* (as a reference in the category of people),
- b) *“This, that, these, those, here, there, now, then”* (as reference in location and distance instructions),
- c) *“One/ones and some”* (as reference in the replacement of an element in a text),
- d) *“And, but, for, or, neither, nor, not only, so, yet”* (as reference in conjunction).⁷³

The expressions above are not appropriate with elements of cognitive strategies of critical thinking theory. However, the expressions above show the features of critical thinking that are appropriate with the definition of organizing level (*coherence*).

Meanwhile, the attributing level focuses more on seeing students' point of view in responding to a problem. Automatically, it will foster critical thinking skills in essay writing. Here are some expressions that generally indicate attributing ability;

“X suggests / argues / states / believes / concludes / proposes that...; X expresses / holds the view that...; X draws attention to...; X describes how....; X refers to...; According to X; There is a view / theory /

⁷³ Ayub-Seken K-Suarnajaya W, “An Analysis of the Cohesion and Coherence of Students' English Writing at the Second Grade of SMAN 1 Labuapi West Lombok”, Singaraja: *e-Journal Pascasarjana Universitas Pendidikan Ganesha*, Volume 1, 2003, 3

argument that....; One view, expressed by X is that...; As stated / suggested / argued / proposed by X.....”⁷⁴

These expressions will be strengthened by the cognitive strategies of critical thinking theory which cover building one's perspective (making or exploring a theory, argument, and belief) and providing an explanation and consideration of viewpoints, theoretical basis, and beliefs (Socrates discussion).

c. Evaluating

The next level is evaluation. The levels of sub cognitive processes are *checking* and *critiquing*. Checking is the process of re-testing a problem to get a conclusion in the form of positive or negative values. Below are words that might appear in essays on checking ability;

- a) *“This is supported by x....; this reflects the view / theory / suggestion of x.....; x accepts / supports / agrees with / concurs with this view / suggestion / theory.....; a similar view is held by x....”* (agree with the statement),
- b) *“This conflicts / contrasts with / is contrary to the view held by x...; this is not accepted by / has been challenged by x.....; the opposite / a conflicting view is expressed by x.....”* (disagree with the statement)⁷⁵

The above expressions will be strengthened by the cognitive strategies of critical thinking theory which cover checking and assessing predictions that are considered true (assumptions), providing arguments and assessing real evidence and conjecture, and outlining several criteria for evaluation that aim to describe quality, value, and standards.

The next level of sub cognitive process is critiquing. At the level of critiquing, it relates to one's thinking in assessing something based on certain criteria. Here are words used to express the ability of critiquing; *“It appears to me that the author...; in my opinion, the article...; the concept presented by the author is intriguing / innovative in that it...; the*

⁷⁴Vivien Perutz, *A Helpful Guide to Essay Writing!*, (Cambridge: Student Services, 2010), 19

⁷⁵Vivien Perutz, 19

*arguments the author presented are inadequately supported...; the article accurately / inaccurately portrays/presents...*⁷⁶

The following cognitive strategies that show critiquing level are thinking accurately through the use of vocabulary that shows critical thinking, differentiating analog position (changing old knowledge in new context), and providing quality assessments to gain trust as a source of information. Other elements are giving some intensive questions that are important and fundamental, investigating and providing an evaluation of interpretations, theories, beliefs, or arguments, and reading carefully (explaining or analyzing readings). Next elements are listening carefully with full concentration, and thinking logically and thoroughly in assessing points of view, principles, and interpretations.

d. Creating

At the creating level, there are several levels of sub cognitive processes which include generating, planning, and producing. At the generating level, students will provide solutions to a problem, in the form of possibilities in the essay. Here are possible words that often describe generating ability;

*“If it would be possible...; my preference would be for...; x would be ready to...; x my preference would be for...”*⁷⁷

The above expressions will be strengthened by the cognitive strategies of the critical thinking theory that cover investigating and providing an assessment of reactions or policies.

The next level is planning. Some simple expressions that might appear in an essay show the features of critical thinking. Below is a group of expressions that generally indicate planning ability;

⁷⁶ Dr. Elaine Khoo, “Expressions Showing Evaluation Useful Sentence Stems for Summary and Critical Review”, *The Writing Centre University of Toronto*, (<https://www.utoronto.ca/twc/sites/utoronto.ca/twc/files/resource-files/xSentenceStems.pdf>, accessed on March 30th, 2019)

⁷⁷ Anthony Elloway, *Grammar for Academic Writing*, (Scotland: English Language Teaching Centre University of Edinburgh, 2013), 36

*“X were prepared.....; x were prepared in accordance with.....; it was designed / planned for.....; x planned / determined to do.....”*⁷⁸

Some simple expressions above will be supported by statements from cognitive stages theory that makes or provides a solution to a problem. The next level is producing.

The production level is associated with doing a plan that is designed to make something. The following are simple expressions that might appear in the essay:

*“So; therefore; accordingly; thus; hence; in conclusion; in short; consequently; to conclude; in brief in all; it might be concluded from this; as a result/ consequence.”*⁷⁹

The above expressions will be strengthened by the cognitive strategies of critical thinking theory which cover producing logical estimates, conclusions, or interpretations, making problem solving relationships with several relevant points of view, and explaining in detail about conclusions, beliefs, and problems.

B. Review of Previous Study

In relation to this research, several previous studies conducted by other researchers that have similar focus with review of some previous studies relate to the researchers' studies. The first previous study comes from Shukran Abdul Rahman and Nor Faridah Abdul.⁸⁰ It focused on analyzing the relationship between Taxonomy theory in teaching critical and creative thinking skills among all students in Malaysia especially in English literature. There were two objectives of this study, among others, examining the literature regarding the relevance of Bloom's Taxonomy of Educational Objective in the learning process of critical and creative thinking and introducing critical and creative

⁷⁸ Adrian Wallwork, *English for Writing Research Papers*, (New York: Springer Science, 2011), 283

⁷⁹ Vivien Perutz, *A Helpful Guide to Essay Writing!*, (Cambridge: Student Services, 2010), 12

⁸⁰ Shukran Abdul Rahman - Nor Faridah Abdul Manaf, “A Critical Analysis of Bloom's Taxonomy in Teaching Creative and Critical Thinking Skills in Malaysia through English Literature”, *Malaysia: Canadian Center of Science and Education*, Vol. 10, No. 9, 2017, 245

thinking skills among students in Malaysia. The method used to collect data was documenting the objectives of the English Literature curriculum, the nature of Bloom's Taxonomy outlines, and the related previous study analysis. The result of the research was developing creative and critical thinking in literary subjects which is very important. The English syllabus with Taxonomy based on holistic learning outcomes contains three sets of abilities: Rational Thinking, Purposeful Thinking, and Effective Relation with Contexts.

The second study was done by a student who graduated from an English language education from Sunan Ampel Surabaya State Islamic University named Ayu Amaliyah.⁸¹ It discussed the level of knowledge in multiple choice questions made by teachers in class X of SMA 1 Sidoarjo based on Bloom's latest cognitive level. So, this study analyzed the multiple choice questions created by the teachers at the school based on the revised Bloom's Taxonomy theory, which will be categorized. The method used was a descriptive qualitative method. Data was taken by analyzing multiple choice items to answer research questions. The instrument used was a table of Bloom's cognitive domain that consists of 19 cognitive processes separated in different levels in this study. The result of the study was finding a level of understanding on the theory of Bloom's Taxonomy as the highest level in making tests. At the understanding level, there were 26 multiple choice questions. The second level of learning manifested in multiple choice items was the applying level. There were 6 multiple choice items in which level of learning was apply level. The lowest level of learning manifested in multiple choice items was remembering level. There were 2 multiple choice items in which level of learning was remember level.

The third previous study was conducted by Siti Zubaidah, AD. Corebima, and Mistiana.⁸² It described the format for critical thinking

⁸¹Ayu Amaliyah, Undergraduate Thesis: *"An Analysis of Multiple Choice Items Made by Teachers Based on Bloom's Revised Taxonomy Theory at Tenth Grade of Sidoarjo 1 Public High School"*, (Surabaya: Universitas Islam Negeri Sunan Ampel Surabaya, 2018), 4

⁸²Siti Zubaidah - AD. Corebima – Mistiana, "Assessment of Integrated Critical Thinking Essay Tests", Malang; *Universitas Negeri Malang*, 2015, 200

assessments modified from the Illinois Critical Thinking Essay Test, which was developed by Finken and Ennis with a minimum structure format. The assessment was used to test students' critical thinking skills through essay tests. The format of this assessment was based on various considerations, including the form of test questions that were often used by educators in Indonesia. The assessment format has been currently tested on various thesis and dissertation studies. The purpose of this study was that the assessment format can be used as a guide for measuring students' critical thinking through the test essay on learning in the classroom. The method used to view the assessment format can work well by making tests specific to a topic and general tests (for all topics). Meanwhile, the result of the study about the assessment rubric was very good, but less practical if used in essay tests for each subject, because generally the essay questions made by educators are more than one problem. Based on the results of the trial implementation of the assessment rubric, it is known that the modified rubric could be used easily, practically, and could accommodate each indicator of thinking critically, effectively and efficiently.

The fourth previous study was conducted by Deepthika Himali Edussuriya, Roshitha Nilmini Waduge, M. D. Lamawansa, and Achini Nuwangika Samaranayake.⁸³ The background of this research was that the system in medical education did not encourage high-level thinking and depended on the teacher. In fact, higher education requires students to learn independently, solve a problem on their own, and synthesize new knowledge. Developing curriculum is one way to ensure high level thinking. Formulating essay questions requires high level thinking related to curriculum quality. Evaluation of essay exam questions will provide evidence in reflecting the teaching and learning process. The purpose of this study was to group essay questions made by undergraduate medical students from Sri Lankan Universities based on cognitive level of Bloom Taxonomy's theory. The

⁸³ Deepthika Himali Edussuriya – Roshitha Nilmini Waduge - M. D. Lamawansa – Achini Nuwangika Samaranayake, “Evaluation of the Cognitive Level of Essay Questions of an Undergraduate Medical Program in Sri Lanka Using Bloom’s Taxonomy”, Sri Lanka: *Journal of Medicine* Vol. 27 No.1, 2018, 3

method used in this study was categorization of questions based on the words of each question and the context in which relevant subject matter was presented. Then, questions were grouped into 3 broad cognitive levels: questions that required low-level thinking skills (Remember, Understand: LOTS), middle-level thinking skills (Applies: MOTS) and high-level thinking skills (Analysis, Evaluation, Making: HEAT). The results of the study on essay questions in all subjects except Physiology, Anesthesiology, Obstetrics and Gynecology, Pediatrics, and Communication Learning and Research modules (CLR) consisted of questions requiring low-level thinking skills. Physiology question essays required high-level thinking skills. Essay questions in the CLR module, Anesthesiology, Gynecology, and Midwifery and Pediatrics required intermediate level thinking skills. The majority of essay questions from the three components (pre-clinical, clinical and clinical) of medical courses required much (knowledge and understanding), with the highest proportion being in the para-clinical department.

The last previous study was conducted by Ömer Gökhan Ulum regarding analyzing an EFL book. The background of this study was that some teachers could not manage the time, opportunity, and abilities needed to build up learning materials in learning English. So, they depended on existing textbooks. The book analyzed was an EFL course book entitled, Q: Skills for Success 4 Reading and Writing. The purpose of this study was to analyze the cognitive level of reading comprehension questions in the EFL course book entitled Q: Skills for Success 4 Reading and Writing.⁸⁴ It tried to identify whether there were weaknesses or strengths of reading comprehension questions in lower and higher level thinking skills according to Bloom's Taxonomy. This study used qualitative research because it described and analyzed the data collected in descriptive analysis. The result of this study was that this course book encouraged students to achieve academically, but it only

⁸⁴ Ömer Gökhan Ulum, "A Descriptive Content Analysis of the Extent of Bloom's Taxonomy in the Reading Comprehension Questions of the Course Book Q: Skills for Success 4 Reading and Writing", *The Qualitative Report*, Volume 21, Number 9, Article 6, 2016, 1674

functioned for lower levels of cognitive processes, due to the lack of steps at a higher level. Low-level questions could increase the acquisition of factual knowledge and the basis for achieving high cognitive skills. The book built up major cognitive skills such as remembering and understanding.

Most previous studies discussed taxonomy theory related to the purpose of learning, assessment, evaluation, integration between taxonomic theory and learning, and others. However, this study will discuss the features of critical thinking of students' essay writing based on Bloom's Taxonomy at the Sunan Ampel Surabaya State Islamic University. Bloom's Taxonomy Theory used in the cognitive domain is divided into six levels (remember, understand, apply, analyze, evaluate, and create). However, this study will be narrowed down to the level of critical thinking which includes applying, analyzing, evaluating, and creating. The researcher wants to analyze documents about student learning outcomes about the features of critical thinking on students' essay writing based on the revised Bloom's Taxonomy theory.



UIN SUNAN AMPEL
S U R A B A Y A

CHAPTER III

RESEARCH METHOD

This chapter presents and discusses several parts of the research method. It contains research design and approach, subject of study, research settings, data and source of data, data collection techniques, research instruments, and data analysis techniques.

A. Research Design and Approach

Research design has an important role in getting data that helps to answer research questions. The approach used in this study is a qualitative approach. Qualitative research is an approach that aims to investigate and interpret life issues faced by individuals or groups of people.⁸⁵ This study sees that the problem of exploring the features of critical thinking in student' essays requires an in-depth explanation. The features of students' critical thinking is in the form of simple expressions, language features, or some critical thinking elements found in every student's argument. Looking from this case, the most appropriate method to describe the problem is a descriptive qualitative method. Furthermore, to obtain valid data, researchers used data collection techniques, namely content analysis. It uses a record table and antconc corpus as an instrument. Jack Fraenkel stated that content analysis is a way that researchers use to analyze human activities indirectly, by taking attention to their communication in detail.⁸⁶ It means content analysis is used to identify people's ideas, opinions, and arguments. This Method is used to analyze the content of documents. The purpose of this research is to explore the features of critical thinking on the results of the learning process in the form of essays made by

⁸⁵ Prof. Dr. Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif, dan R&D* (Bandung: Alfabeta, 2017), 10

⁸⁶ Jack R. Fraenkel – Norman E. Wallen – Helen H. Hyun, *How to Design and Evaluate Research in Education Eighth Edition*, (United States: McGraw-Hill, 2012), 478

university students. Therefore, the method that is suitable for this research is the content analysis method.

This study analyzes essays made by university students based on Bloom Taxonomy theory using the cognitive domain. There are 6 categories in the cognitive domain to analyze the features of critical thinking of students in the sentences contained in the essay. This research focuses on the cognitive domain in the critical thinking category starting from applying, analyzing, evaluating, and creating.

B. Subject of Study

Based on the formulation of the problem, the subject is a university students' essay. This study takes data from student learning outcomes in the form of essays. The characteristics of student essays selected as research subjects were several essays from university students from the English Education Department of Sunan Ampel State Islamic University, Surabaya. Besides that, the essay must be written by students who have just taken and passed from the Written English course in the third semester, 2018/2019. Written English classes consist of 4 different classes. The research subjects taken were 3 student essays in each different Written English class. Thus, the number of subjects of this study were 12 student essays. The essay in this study is classified into three levels of essay quality, including the basis, standard, and high quality of the essay. The qualifications are based on the student's essay score from the lecturer. The essays who have scores below 80 are classified as basic quality essays. Scores 81 to 90 are classified as standard essay quality. While students who get a score above 90 are given high-quality essays. The type of essay analyzed is argumentative essays written by students.

C. Data and Source of Data

The data found in qualitative research is usually in the form of actions, expressions, sentences, phrases, words called soft data. It's not like quantitative

research where the data is in the form of statistics called hard data.⁸⁷ The data of this study are features of critical thinking found in the essays made by students of the English Language Education Department at State Islamic University of Sunan Ampel Surabaya. The data appears as a number of phrases, simple expressions, language features, or elements that shows the features of thinking with their level based on Bloom Taxonomy theory.

The source of data from this research is student' essays. The essays were developed by students from the English Language Education Department at State Islamic University of Sunan Ampel Surabaya. There are 12 essays of students who have just taken and passed from Written English in the academic year 2018/2019. The use of documents as a source of data in research is intended as the main source and evidence in this study. Documents help to provide accurate information from other sources in detail and specific.⁸⁸ The document provides evidence of the features of critical thinking seen in the essays created by students.

D. Data Collection Technique

The first way to collect data is to ask permission and explain the purpose of the study to students for which the essay has been selected. There were 12 student essays selected as subjects of this research. After obtaining student essays, researchers analyzed the essays to obtain data in the form of features of critical thinking in student essays based on Bloom's Taxonomy theory. This study analyzed data using instruments in the form of record tables and Corpus Antconc. So, the data obtained in this study are simple expressions, phrases, linguistic features or elements that show the features of students' critical thinking. This study uses content analysis techniques to answer research questions. Content analysis is called investigating documents or records which is an approach to qualitative research that is not clearly visible that is part of

⁸⁷ Dr. Farida Nugrahani, M.Hum, *Metode Penelitian Kualitatif dalam Penelitian Pendidikan Bahasa*, (Surakarta: Cakra Books, 2014), 107

⁸⁸ Dr. Farida Nugrahani, M.Hum, 109

the study used as a data collection tool.⁸⁹ Because the subject of this research is a document in the form of a student essay, the technique is appropriate with a focus on the research. The focus of this research is to analyze the features of critical thinking on student essays.

E. Research Instrument

Gaining the data is an important step to conduct research, so researchers need a tool to get data called an instrument. The following are several instruments used in this study:

1. Researcher as Key Instrument

In this study, researchers became an instrument. It means that researchers have an important role in analyzing data in the form of essays. It started from the researcher reading essays to analyze every word, phrase, or sentence contained in the essay. Reading essay activities carried out several times to get valid data. Therefore, researchers are called key instruments.

2. Record Table

This instrument helps researchers to analyze the contents of the essay. A record table is an instrument in the form of a table column consisting of several parts including: structure of essays, cognitive levels, sample expressions of theories, occurrences (percentages), and comments (see appendix 1.1). The researcher analyzed every word movement, simple expression, or phrase in the essay that showed the features of critical thinking based on Bloom's Taxonomy theory in the cognitive domain which consisted of 6 levels: remember, understanding, applying, analyzing, evaluating, and creating. This study is narrowed to the level of critical thinking which includes application, analysis, evaluation, and creation.

⁸⁹ Donald Ary, *Introduction to Research in Education*, (New York: Nelson Education, 2010), 443

3. Corpus Antconc

This study investigates written data using the corpus. A Corpus is a group of texts in the form of soft data stored on a computer.⁹⁰ In other words, the corpus instrument is a software application used to analyze documents. Corpus helps this research in collecting words, simple expressions, or language features that show the features of critical thinking in essays made by students based on Bloom Taxonomy's theory. Word lists are analyzed based on the theories listed. The type of corpus used is Antconc Corpus. The menu bar that assists in data retrieval is in the form of a word list (counting how many words often appear), concordance (displaying a list of sentences containing certain words searched), concordance plot (displaying the word we are looking for), and view files (see all text).

F. Data Analysis Technique

Analytical techniques are an important part of research. It helps the researcher find new data in the form of knowledge or information. Research questions will be answered by managing or concluding the data into a finding. Following are the steps used for data analysis techniques, according to Cresswell.⁹¹ This research requires and collects data in the form of 12 student essays. The focus analyzed in this study is about the features of critical thinking in the essays that students have made based on Bloom Taxonomy's theory. After collecting data, the second step is preparing and organizing data for analysis. Prepare Corpus Antconc and record tables as instruments for retrieving data. The researcher arranged 12 essays to be collected on the Corpus Antconc application to analyze each sentence contained in the essay. From the application, researchers can analyze words or phrases that often appear as a form of critical thinking.

⁹⁰ Anne O'Keeffe - Michael McCarthy-Ronald Carther, *From Corpus to Classroom: language use and language teaching*, (United States of America: Cambridge University Press, 2007), 2

⁹¹ John. W. Cresswell, *Research Design: Qualitative, Quantitative and Mix method Approach*. (London: Sage Publications, 2014), 247

Reading all the data is the third step. After all data is ready, this researcher read all data one by one in detail in order not to miss important information provided by sources of data. The researcher read the data provided by the Corpus Antconc. Indirectly, the researcher also gave a note about the results of entering data in the Corpus Antconc as the first instrument in analyzing the features of critical thinking contained in the essay based on Bloom Taxonomy's theory. The researcher decided which data is suitable to answer the research question.

The fourth step is coding or identifying the data. The researcher started to identify words or phrases that were already determined before in essays. The word list shows the features of critical thinking based on Bloom Taxonomy's theory. There are 19 sub cognitive processes, which in each sub cognitive process have a word list contained in the essay. This step is also used to identify and select which data can be needed or discarded. Specifically identifying the features of critical thinking based on revised Bloom Taxonomy.

The fifth step is coding to build a description / theme by categorizing the data that appears according to the theory about possible features of critical thinking which has been compiled based on the theory of critical thinking. High level of critical thinking based on Bloom Taxonomy's theory is at the level of analysis, evaluation, and creation. If there are similarities in the same phrases between the sub cognitive processes with one another, they will be chosen according to cognitive strategies. The final step is interpreting finding. The analysis data above were discussed and explained more in chapter 4 of this study; finding and discussion. The findings related to the theory mentioned above. Analyzing the data to make a conclusion from the whole research is the last step. Sample of analysis can be found in appendix 1.

G. Trustworthiness of the Data

The trustworthiness of the data in a study has an important role. In the research, researchers must obtain valid data. Theory that is suitable for trustworthiness of the data using Triangulation theory. Triangulation theory is

a method that aims to provide an understanding of researchers' in-depth research to be conducted. In fact, there are 4 types of triangulation. These are data triangulation, method triangulation, investigator triangulation, and theory triangulation.⁹²

The type of triangulation theory that is appropriate with this research is time triangulation. It is because this research focuses on analyzing data in the form of essays that require several times to review. The researcher must read the essay repeatedly to find the features of critical thinking. If the research finds the features of critical thinking in the sentence, it must be ensured by reading and understanding the content of the sentence. This activity is carried out to obtain valid data.

H. Research Stages

The following are processes of conducting research explained in the research stages: the first stage is gathering information from several university students about problems encountered in the process of creating an essay, especially for students who have graduated in written English courses. Some students explained that the problem that often occurs is not mastering and understanding the features of critical thinking, so it proves the lack of quality argument in essays. The problem attracts attention to be researched about the features of critical thinking on students' essays based on the theory that has been considered.

The second stage is to formulate the title, research question, theory, and method in accordance with the research with the research problem. Further, this research has been approved by the lecturer to investigate the problem in more detail. The next stage is to design a proposal by limiting research using Bloom's Taxonomy theory and explaining phenomena in the field. In this problem, the researcher used descriptive qualitative research.

After the research proposal has been designed, the next stage is to collect data. The data are taken from 12 essays made by English Language

⁹²David Hales, *An Introduction to Triangulation*, (New Orleans; UNAIDS, 2010), 17

Education Department students at State Islamic University of Sunan Ampel Surabaya. Type of essay chosen is an argumentative essay taken from students who have passed a written English course. The data will be analyzed using instruments. The instruments are Record Table and Corpus Antconc. After the data has been analyzed, the result of analysis will be linked to the theory. Then, the researcher will draw conclusions of the research based on the findings which will be explained in more detail at the end of the study.



CHAPTER IV

RESEARCH FINDINGS AND DISCUSSION

This section provides and discusses research findings. Research findings and discussions focus on research questions. The research findings section describes the features of critical thinking on students' essays based on Bloom's Taxonomy theory in detail. Meanwhile, the research discussion section outlines the importance of findings in research related to the theory reviewed in chapter two.

A. Research Findings

The data related to the features of critical thinking on students' essays based on Bloom's Taxonomy theory were collected by analyzing documents.

1. Elements of Critical Thinking Based on Bloom Taxonomy Represented in Students' English Essay

To obtain related data about the elements and features of critical thinking in student essays based on Bloom Taxonomy theory, this study analyzed 12 essays of students from the Department of English Teacher Education, Sunan Ampel State Islamic University Surabaya. The chart 4.1 below shows the results of the essay analysis. The essays are put into the hierarchy based on (1) the expressions used and (2) the elements of critical thinking based on Bloom's taxonomy as reflected by the expressions.

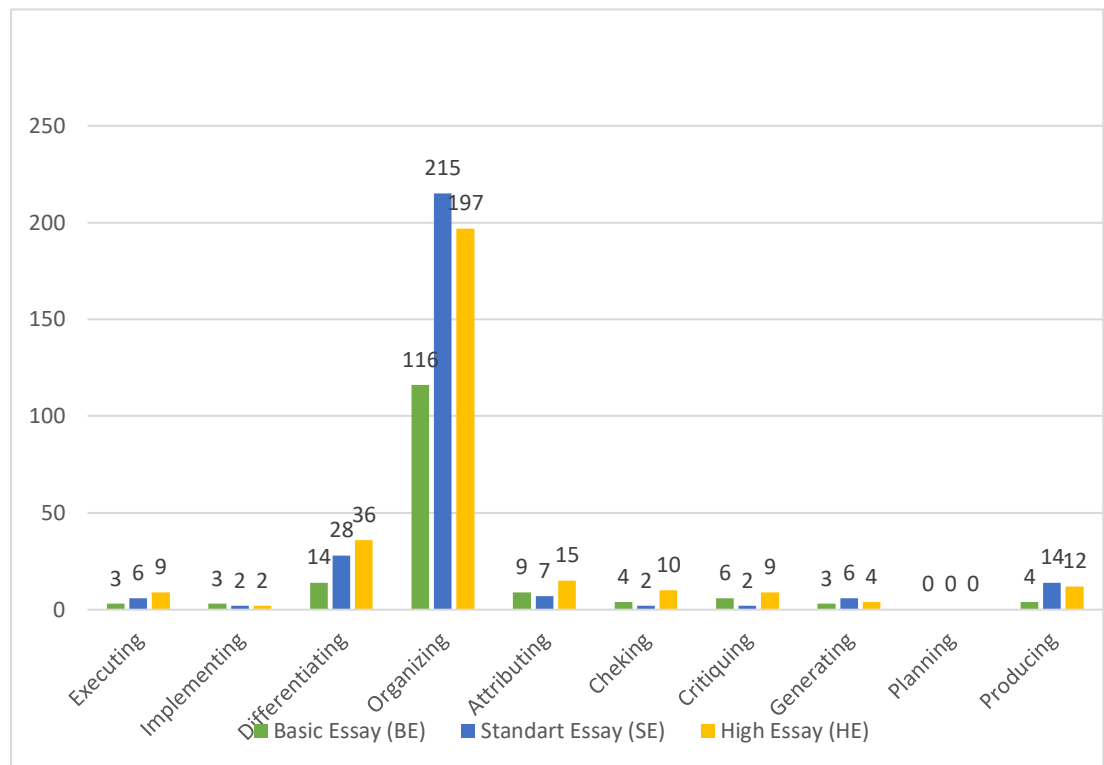


Chart 4.1 the Element of Critical Thinking in Students'

English Essay Reflecting Bloom's Taxonomy

Based on the chart 4.1 above, there were ten sub-cognitive processes found in the students' English essay writing. They are Apply, Analyze, Evaluate, and Create. Essay writings created by university students were basic essay, standard essay and high quality essay. The first level was Applying, especially in the executing sub-cognitive process, showed the features of critical thinking in basic essays as many as 3 points, standard essays as many as 6 points, and high essays as many as 9 points. Whereas in Implementing, it showed that the similarity of the number of points at the standard and high essay level was 2 points. Meanwhile, the basic essay had 3 points. The next level was Analyzing consisting of differentiating, organizing, and attributing. Differentiating showed that 14 points were in the basic essay, 28 points were in the standard essay, and 36 points were in the high essay. In Organizing, the basic essay had 116 points, the standard essay had 215 points, and the high essay had 197 points of features of critical thinking. Whereas in attributing, the features

of critical thinking had the highest points consisting of 15 points on high essay, 7 points on basic essay, and 9 points on standard essay. In addition, the level of evaluating which has a sub-cognitive process consists of checking and critiquing. Checking had 4 points for the basic essay. Two (2) points were for standard essays, and 9 points were for high essays. On the other sub-cognitive process, critiquing had 6 points for basic essays, 2 points for standard essays and 9 points for high essays. The last level was Create. It has a sub-cognitive process consisting of generating, planning, and producing. Generating indicates that the basic essay had 3 points of features critical thinking, the standard essay had 6 points, and the high essay had 4 points. Level of Planning did not indicate the existence of features of critical thinking on all quality essays. The last sub cognitive process was produced. It indicates that there were 4 points for basic essays, 14 points for standard essays, and 12 points for high essays. These results explain that the features of critical thinking often appear in essays made by the students at the element of analyzing, especially in organizing. It is in contrast with the level of producing which does not have the features of critical thinking. Again, it is important to note that the purpose of this research is not to categorize the levels of the students' essay but is more to explore how critical thinking is expressed or attributed to the expressions that reflect the six levels of critical thinking in the hierarchy of Bloom's Taxonomy.

In general, an essay has three important parts. These are an introduction, body, and conclusion paragraph. Features of critical thinking on essays made by the students were located in the three parts of the essay. The explanation is on the following Table 4.1.

Table 4.1. Features of Critical Thinking in Part of Essay

Bloom's Taxonomy	Sub Cognitive Process	Part of essay	Total Features of Critical Thinking
Apply	Executing	- Introduction Paragraph (2) - Body Paragraph (13)	18

		- Conclusion Paragraph (3)	
	Implementing	- Introduction Paragraph (1) - Body Paragraph (4) - Conclusion Paragraph (2)	7
Analyze	Differentiating	- Introduction Paragraph (12) - Body Paragraph (55) - Conclusion Paragraph (12)	79
	Organizing (category of people)	- Introduction Paragraph (18) - Body Paragraph (151) - Conclusion Paragraph (31)	200
	Organizing (reference in location and distance instructions)	- Introduction Paragraph (24) - Body Paragraph (70) - Conclusion Paragraph (7)	101
	Organizing (in conjunction)	- Introduction Paragraph (32) - Body Paragraph (148) - Conclusion Paragraph (24)	204
	Organizing (in the replacement of an element in a text)	- Introduction Paragraph (6) - Body Paragraph (17) - Conclusion Paragraph (-)	23
	Attributing	- Introduction Paragraph (2) - Body Paragraph (26) - Conclusion Paragraph (3)	31
Evaluate	Checking	- Introduction Paragraph (4) - Body Paragraph (7)	16

		- Conclusion Paragraph (5)	
	Critiquing	- Introduction Paragraph (3) - Body Paragraph (9) - Conclusion Paragraph (5)	17
Creating	Generating	- Introduction Paragraph (1) - Body Paragraph (11) - Conclusion Paragraph (1)	13
	Planning	-	-
	Producing	- Introduction Paragraph (1) - Body Paragraph (19) - Conclusion Paragraph (10)	30

The data from table 4.1 shows that the features of critical thinking in the students' essay were mostly found in the body paragraph in each sub-cognitive process. It is because many arguments were strengthened by the fact to convince the readers. Then, the second part of the essay which has some features of critical thinking was the introduction paragraph. Conclusion paragraph is the part of the essay which had the least points of features of critical thinking. The lowest level of cognitive process in critical thinking was applying which had executing and implementing sub cognitive processes. In executing, features of critical thinking that mostly appear in the essay section were body paragraphs which had 13 points, introduction with 2 points, and conclusion paragraphs with 3 points. So, the total of features of critical thinking appearing in executing was 18 points on all essay qualities. Furthermore, in the implementation sub-cognitive, the introduction paragraph had 1 point, the body paragraph had 4 points, and the conclusion paragraph had 1 point.

These were different levels from analyzing abilities that had many points. In differentiating 12 points were for the introduction paragraph, 55 points were for the body paragraph, and 12 points were for the conclusion paragraph. The number of points collected was 79 points. Organizing is classified into 4 parts, namely organizing as a reference category of people which had 18 points in the introduction paragraph, 151 points in the body paragraph, and 31 points in the conclusion paragraph. The sum of all points in organizing as a category of people was 200 points of critical thinking. However, organizing as reference in location and distance instructions had 24 points for introduction paragraphs, 70 points for body paragraphs, and 7 points for conclusion paragraphs. So, the total point of features critical thinking in sub-cognitive organizing as reference in location and distance instructions was 101 points. The next is organizing in conjunction. In the introduction paragraph there were 32 points, body paragraph had 148 points, and conclusion paragraph had 24 points. The number of critical thinking features in organizing in conjunction was 204 points. The last organizing is in the replacement of an element in a text which had 6 points in the introduction paragraph, 17 points in the body paragraph, and in the conclusion paragraph did not have the features of critical thinking point. Hence, total features of critical thinking in this section were 23 points. The next sub-cognitive is attributing. There were 2 points for the introduction paragraphs. Meanwhile, the body paragraph had more points compared to other paragraphs which were 26 points. Conclusion paragraph only had 3 points. 31 points of critical thinking were on attributing level.

Going up to a more difficult level is evaluating which has 2 sub-cognitive processes namely checking and critiquing. In checking, the highest features of critical thinking points in the body paragraph had 7 points. Introduction paragraph had 4 points and the conclusion paragraph had 5 points. The total features of critical thinking in checking level were 16 points. Whereas, critiquing level had 3 points for introduction paragraphs, 9 points for body paragraphs, and 5 points for conclusion

paragraphs. 17 points were the total features of critical thinking on critiquing level. The most difficult level was creating. In creating, there were generating, planning, and producing. Generating level had 13 total features of critical thinking points. The body paragraph had 11 points. There was 1 point in the introduction and conclusion paragraph. Planning level did not have points. Producing had 30 points as total features of critical thinking. It was divided into 3 parts, namely introduction which had 1 point, body paragraph with 19 points, and conclusion with 10 points. From the data collected, it can be concluded that the features of critical thinking often appeared in body paragraphs at each level.

2. Features of Critical Thinking

The most important data from this study were the features of critical thinking based on the revised Bloom's Taxonomy theory that appears in essays made by students. The findings of this research were the existence of words, phrases, or simple expressions that show the features of critical thinking in accordance with the theory contained in chapter 2. In addition, words, phrases, or simple expressions also need support from elements of cognitive strategies in critical thinking to determine the stage of critical thinking. The following are the findings obtained along with an explanation.

a. Applying

At this level it involves knowledge of procedures to solve the problems taken in an essay. If students are able to solve problems using appropriate procedures, then students can pass this level. This level has two sub-cognitive processes including executing and implementing.

1) Executing

Students applied procedural knowledge to problems, which they already knew in essays. The types of expressions that appear on the essay were *then, first, second, third, firstly, secondly, to start with,*

final, and *last*. Meanwhile, the following are the examples of simple expressions that appeared at the executing level in the essays.

- a) After government repaired the system of public transportation **then** the government must limit the number of motorized vehicles in Indonesia, raise taxes from vehicles motorized so that the people of Indonesia move using public transportation. (4th essay document, Conclusion paragraph)
- b) **First**, social media connects sellers with buyers. (7th essay document, Body paragraph)
- c) The **last** reason is the children is far from bullying, because the children is far from the friends who have deviant nature. (12th essay document, Body paragraph)

From the three simple expressions above, we found "*then*", "*first*", and "*last*". Those were some expressions used to show a sequential procedure and the problem has been identified. In the first example, it is explained that before "*then*", there is a sentence that requires a solution of the problem. The problem is government is improving public transportation. The word "*then*" is a connecting word that is a procedure which gives a solution action in the next sentence. The next sentence contains a solution that the government must reduce the use of motorcycles and increase taxis for public transportation. The second and third examples show that there are several sequence procedures for an argument. In the second example is the order of the first procedure of argument about social media. The following is the sequence of the second and third arguments: "*Second, a lot of people are helped by social media. Social media helps to connect people with each other with their own way and on that scale none before (Blanchard, 2015). Third, social media build a community*" (7th essay document, body paragraph). In this part of the essay, the students state "*second*" and "*third*" and followed by a sequence of arguments about benefits of social media in the essay. This shows

that critical thinking is featured by the use of the words “*first*, *second*, and *third*” to show a sequence of arguments in solving problems at the executing stage. Meanwhile, the last example also shows the order of the reasons contained in the essay that discusses the impact of homeschooling. The following is one of the orders of the previous reason, “*Another reason the children’s is safety, because the parents can watch over their children directly*” (12th essay document, Body paragraph). Starting from that reason to the next sequence of reasons, it is connected with the features of critical thinking by the use of the word “*last*”.

2) Implementing

The students used this level in essay writing when they faced an unknown problem, then developed it by taking solutions with procedures from their own point of view. The features of critical thinking in the form of phrases in the essay are *after*, *before*, *since*, *during*, and *till*. Phrases at this level are rarely used in essays, especially argumentative essays. Here are some phrases that appeared as feature of critical thinking on implementing:

- a) These stories use the immersion method, which is based **after** the way children learn their language. (2th essay document, Body paragraph)
- b) **Since** the emergence of these social networking sites like Twitter and Facebook as key tools for news, journalists and their organizations have performed a high-wire act. (7th essay document, Introduction paragraph)
- c) Both export and import of Indonesia in international trade between 2000 **till** 2006 experienced an increase 6, 82 percent and 7, 65 percent in every year. (10th essay document, Body paragraph)

The words “*after*, *since*, and *till*” were the features of critical thinking because the expressions were assisted with elements of cognitive

strategies that investigate the involvement (implication) and consequence. In the first example, it shows that the children must be able to master their own language, before watching a story contained in a TV program that uses the immersion method. The sentence is like a reciprocal relationship. Meanwhile, the second sentence is the involvement between social networking sites and journalist activities that have many advantages. So, journalists can easily publish their news through social media networks. The last sentence is the involvement of vulnerable time to increase export and import activities in Indonesia. So, each sentence above contains the involvement of one another. It raises the consequence as explained in the sentence that appears after the word.

b. Analyzing

Analysis is the activity of dividing materials into several sections in accordance with their each characteristic. However, these sections still have their own connection. The university students put the sub cognitive process to the level of analysis in the essay they have made. These levels are divided into differentiating, organizing, and attributing.

1) Differentiating

At this level, the students were able to distinguish one information from another information. It is part of critical thinking, especially in presenting some information that should be written in an essay to strengthen the argument. Simple expressions commonly used by the students were *then before, although, than, rather than/rather, however, but/but also, on the other hand, in contrast/contrary, beside, even though, in other sides, not only but also, better/better than, nevertheless, similar, and same*. Differentiating means separating, where the students must be able to group by type. Starting from grouping which has differences and similarities. The

following are example sentences using the features of critical thinking in differentiating in essays:

- a) Cigarette have move negative effects **than** the positive effect. (*2th essay document, Conclusion paragraph*)
- b) **Beside** the parents' perception, the children perception is also important. (*8th essay document, Body paragraph*)
- c) Teacher asks the students to speak in front of the school to make student be brave to speak in public speaking. **But** in home schooling teacher cannot ask the student like speaking in front of another students. (*12th essay document, Body paragraph*)

From the first example, we found the word "*than*". It can be seen from the sentence that there are two comparisons between the negative impact and the positive impact of smoking. One of the positive effects of smoking contained in the essay is to provide scholarship programs for education in Indonesia, while the negative effect is the increasing number of smokers in Indonesia. From these differences, it can be concluded that smoking has a different effect on Indonesia, both positive and negative. It is supported by the existence of cognitive strategies identifying the different things in two things (contradiction). So, the contents of the sentence and the cognitive process elements are appropriate. Meanwhile, the second example is the word "*beside*". It shows the features of critical thinking at the differentiating stage. Based on the elements of cognitive strategies of writing important similarities and differences, it shows that there are differences regarding the importance of children's perceptions from parents. In the third example, the word is "*but*". The essay writer tried to give an open view to the reader about the facts and theories. These facts form the different activities found in regular schools. However, the word "*but*" becomes a connecting link between differences in homeschooling. These activities can be carried out according to elements of cognitive

strategies about thinking openly, such as distinguishing points of view, principles and interpretations.

2) Organizing

Feature of critical thinking contained at this level is that the students were able to include important elements to be used as a comprehensive and suitable essay structure. Organizing in the essay can be in the form of selecting conjunction, pronouns, demonstrative words, and others. At this level, it is divided into 4 parts. Those are references in the category of people (*they, them, it, my, I, its, their, we, our, you, your, he, her, his, himself, own, and yourself*) and references in location and distance instructions (*this, there, that, those, these, now, and here*). In addition, there are references in the replacement of an element in a text (*One and some*) and references in conjunction (*And, for, so, or, yet, not only, but also*). The following are the expressions that appeared in the essays made by students:

a) Reference in the category of people:

It can be illegal medicine because they don't have accurate diagnosis for laboratory. (*1st essay document, Body paragraph*)

b) Reference in location and distance instructions:

However, **that** is not true. (*6th essay document, Body paragraph*)

c) Reference in the replacement of an element in a text:

One of the university which has cooperation with PT. Djarum Indonesia is Yogyakarta University. (*10th essay document, Body paragraph*)

d) Reference in conjunction:

There are some people who began to realize **and** denying that what industrial companies of cigarettes produced is dangerous

products that threatens public health **and** it has an impact on country's deficit for hospital as a result of the smokers. (*2nd essay document, Introduction paragraph*)

The features of critical thinking shown above are in the organizing level, where the features of critical thinking are useful for organizing into a single unit (coherence). The first feature of critical thinking is "*it*". The word is used to organize one sentence with the next sentence as a reference category of person or thing. It is proven that the word "*it*" refers to alternative medicine that is being discussed in the essay. Meanwhile, the second example is "*that*". In that sentence, it is for a reference to location and distance instructions. The previous sentence explains that cigarette addicts will get skin cancer. Further, the third example is "*one*" which refers to an element in the text. In that sentence, it is explained that the word "*one*" becomes the pronoun of the number of universities that only one has cooperation with PT. Djarum Indonesia. Finally, organizing for a reference in conjunction, one of which is the word "*and*" combines one sentence that explains about people who realize with another sentence where people deny about what companies of cigarettes produced are dangerous products. Then, the sentence combined with the next sentence showed the impact on the country's income in hospitals.

3) Attributing

The students gave opinions, points of view, and opinions clearly about a problem in the essay freely, especially in the type of argumentative essay. "*Stated that, argue/argue that, other view, based on, claim that, suggested, say that, according to, believe that, would like to say that, perception*" were included in expressions used by students in essays to show critical thinking in this level. Opinions, points of view, and good opinions must be followed by strong facts. Below are the sample expressions found in student essays in attributing level:

- a) The president of Indonesia has **suggested** replacing other plants that are more beneficial than tobacco to reduce health risks, such as vegies, medical plants, rice or other plant that have more income without excessive taxation. (*2nd essay document, Body paragraph*)
- b) **According to** the results of the national cancer institute research, woman that had been smoking four packs per year that can the risk of breast cancer by thirtieth five percent and for smokers twenty packs per year become fifty four percent. (*6th essay document, Body paragraph*)
- c) Most people **believe that** academic is number one to educate the children. (*12th essay document, Body paragraph*)

Feature of critical thinking that came up is "*suggested*" which belongs to this attributing level, because the word refers to a person's point of view, opinion, and opinion of something. Element of cognitive strategies that support the sentence was building one's perspective (making or exploring a theory, argument, and belief). In that sentence, it is explained that the Indonesian president suggested looking for other plant substitutes that are more profitable than tobacco. Then, it was followed by arguments or beliefs about some plants that reduce health risks. The second sentence is "*according to*". The word is generally used to give a view of someone or something. The second example provided a detailed explanation of the results of research conducted by the national cancer institute on the risks of women who smoke. Thus, the reader considers smoking. Hence, the appropriate cognitive element is providing an explanation and consideration of viewpoints, theoretical base, and beliefs (discussion Socrates). Then, the next feature of critical thinking that appeared in the essay is the word "*believe that*", where the word shows someone's belief in something. The sentence is supported by

elements of cognitive strategies about building one's perspective (making or exploring a theory, argument, and belief).

c. Evaluate

At this level, the students provided an evaluation or assessment of a problem contained in an essay. Assessments given can vary. Starting from agree to disagree which must then be followed by a strong reason to convince the reader. The evaluate level is divided into two sub cognitive processes, they are checking and critiquing.

1) Checking

In the essay, the students did a checking or retesting process to get actual conclusions on several arguments. This aims to get a solution. Some expressions that indicate the features of critical thinking in the students' essay are *i am disagree*, *denying that*, *complain that*, *in contrast*, *refute statement about* (disagree with the statement) and *should be*, *prefer*, *encourage*, *agree* (agree with the statement). Here are some examples in the essay at the checking stage:

- a) In my opinion, **I am disagree** with alternative forms of medicine cause its unclear process of healing someone without any accurate diagnosis and the human body it's not toys for medic dosses so be good person to choose a process of healing.
(1st essay document, Conclusion paragraph)
- b) **In contrast**, I think not all students in regular school have good character, so there is no assurance that the children can study comfortably without any interference. (8th essay document, Body paragraph)
- c) **In contrast** the government **agree** if the children must school in regular school. (12th essay document, Conclusion paragraph)

The phrase "*I am disagree*" shows an assessment of the problem in the essay. In addition, the sentence also provides a conclusion from several previous statements, one of which is "*Maybe the cause of*

payment for going to hospital is more expensive than before, lately many promotions and information from breaking news about offering alternative forms of medicine with the cheap payment and get heal soon." (1st essay document, Introduction paragraph). This statement is one of several reasons why someone would prefer to take alternative medicine. That is because it is cheaper than that in the hospital. However, the students provided a conclusion in the form of an assessment of not agreeing to alternative medicine, but preferring treatment in the hospital. The reason is the diagnosis given in alternative medicine is unclear. Element of cognitive strategies that corresponds to the first example is providing real arguments and assessing evidence and conjecture. The second phrase is "*in contrast*". The phrase shows contrast (assessment of disagreement) that not all students in regular schools have good personalities. The previous statement contained in the essay is "*They are also taught and educated by teachers who are experienced in their fields. As a result, parents can entrust their children's education to regular school.*" (8th essay document, Body paragraph). The statement refers to the fact that some people think that all students taught by expert teachers will produce good students. However, the researcher did not agree with the statement. The next sentence is part of the cognitive strategies element about checking and assessing predictions that are considered true (assumptions), where the sentence is in the form of assumptions about the convenience of students in learning activities in regular schools. The third phrase is "*in contrast*" and "*agree*". However, it has the same purpose, which is the evaluation of the government which prefers regular schooling over homeschooling. The phrase "*in contrast*" refers to the previous sentence "*We know that there are many perceptions of home schooling more safety*" (12th essay document, Conclusion paragraph). The sentence is inversely proportional, so it can be

interpreted that the government does not approve of home schooling. Meanwhile, "*agree*" means that the government supports children to enter regular schools. This reflects the cognitive element "Check and assess predictions that are considered true (assumptions)" where the sentence is to re-check an assumption that is considered true.

2) Critiquing

At this level, it involves providing both positive and negative assessments of the problems discussed in the essay, with certain standards and criteria. When writing the essays, the students could provide an assessment in accordance with their point of view followed by a clear reason. The features of critical thinking used by students in writing essays at this level are *in my opinion*, *think/think that*, *mention that*, and *feel that*. Criticism is the essence of critical thinking. Below are sample expressions that appeared in the essay that indicate the level of criticizing:

- a) **In my opinion**, I am disagree with alternative forms of medicine cause its unclear process of healing someone without any accurate diagnosis and the human body it's not toys for medic dosses so be good person to choose a process of healing. (*1st essay document, Conclusion paragraph*)
- b) **In my opinion**, the alternative medicine is move beneficial but we also need the modern medicine. (*5th essay document, Conclusion paragraph*)
- c) **In my opinion**, by existing those scholarship program, it can help students who have big desire in learning and helping the effort of improving the quality of Indonesian education. (*10th essay document, Body essay*)

Based on the three examples above, the expression "*in my opinion*" is the feature of critical thinking at this level, where the expression indicates an assessment or point of view of an author of the problem. Besides, the expression is general. Positive or negative judgments

appear depending on the essence of the sentence. The first sentence shows the quality of the students in providing an assessment based on their views on alternative medicine which is less accurate in diagnosing. In addition, the students (authors) intend to convince the readers to consider choosing treatment. That is as noted in cognitive strategies as an element of critical thinking in the form of providing quality assessments to gain trust as a source of information. The authors give a negative assessment of alternative medicine for reasons that the treatment process is unclear and without a diagnosis. Meanwhile, the second sentence shows the positive judgment given by the authors. That's because the authors give a judgment that can build and not drop. However, in that sentence, the students have a good conviction to continue to use two methods of treatment for the better. Elements of cognitive strategies that are appropriate are investigated and provide an evaluation of interpretations, theories, beliefs, or arguments. This is evidenced by the contents of the sentence which shows the assessment of beliefs and arguments given by the authors. Then the third sentence is a positive assessment. That's because the sentence contains about the positive impact of the scholarship program that comes from cigarette factories. Based on the cognitive strategies elements of thinking logically and thoroughly in assessing points of view, principles, and interpretations, the sentence includes critical thinking, where the sentence reflects open thinking and positive assessment of the influence of cigarette factories on education in Indonesia.

d. Create

It is creating an activity to collect some of the elements into an integrated and systematic unit. The students need this level in the essay writing process. That is because in designing an essay, it requires creative and innovative thinking when making arguments. Being creative in making an argument in an essay is defined as the activity of

understanding a problem, making a solution, and designing a solution for a problem. Actually, at this level it is divided into 3 sub cognitive processes, including Generating, Planning, and Producing. However, this study only found 2 sub cognitive processes contained in the essay.

1) Generating

The students were able to show the focus of the problem contained in the essay, which then made a solution with a possibility or hypothesis. The student used creative thinking in solving problems by hypothesizing. Words that describe generating ability in the students' essay are *if* and *might*. Some examples of features of critical thinking that appeared on the essay at the generating level are:

- a) This is very troubling, **if** Indonesia only looks at the aspect of state revenue and scholarships only from the large cigarette industry, there are many countries' income from exports of service goods in terms of the quality of spices, jewelry, and tourism services. (*2nd essay document, Body paragraph*)
- b) Sometimes, **if** we use alternative medicine every day, we will get side effects of alternative. (*5th essay document, Body paragraph*)
- c) The method take a long time to cure and **if** the practice use the method wrongly, so it will be damage for our body. (*9th essay document, Body Paragraph*)

From the three examples above, the word "*if*" indicates the possibility of an event. In addition, the three sentences indicate an element of cognitive strategies about Investigation and provide an assessment of reaction or policies. The first instance is about the negative judgment of the author on income countries (*foreign exchange*) that only comes from cigarettes alone. The authors give a negative response or reaction if Indonesia only sees state income from cigarette factories, while there are still many sources of state

income, such as quality of spices, jewelry, and tourism services. The second sentence shows the features of critical thinking, where the authors only hypothesized that the use of alternative medicine every day will have side effects. However, the author did not provide an explanation of the side effects of using alternative medicine in the following sentence. The author only gave a reaction/assessment that is lacking because alternative medicine will not give a clear picture of the disease. That is shown in the next sentence "*Therefore, sometimes with alternative medicine we cannot know the process on the inside of the body*" (5th essay document, Body paragraph). The last sentence shows the features of critical thinking by hypothesizing that alternative medicine will damage the body, if the practitioner is wrong in the process of its application. In addition, the sentence is in accordance with the elements of cognitive strategies about an assessment conducted by the authors of the alternative methods that require a long time.

2) Producing

Producing is the activity of making plans that produce something aimed at solving a problem contained in the students' essays. Besides, producing can be said as a conclusion. Expressions found as features of critical thinking at this level are *so, sum up/ to sum up, in short, therefore, the result/as a result, in conclusion/as the conclusions, overall, and thus*. The level of producing is not only located at the conclusion paragraph alone, but it can be located in the body or the introduction paragraph. The following are the sample expressions that appeared in the essay writing of the students at the producing level:

- a) **In short**, learning English through watching TV is a good way for increase speaking skill, especially for children. (3th essay document, Conclusion paragraph)

- b) **As a result**, parents can entrust their children's education to regular school. (*8th essay document, Body paragraph*)
- c) According to Turkle (2012), intimacy of human relationships is replaced by technologies, leaving people lacking intimate and quality interactions with others, **thus** increasing loneliness. (*11th essay document, Body paragraph*)

The expressions shown in the three sentences above are "*in short*, *as a result*, and *thus*" which show an outcome of a problem in the form of a solution. The first feature of critical thinking is "*in short*". That expression is an expression explaining the authors' final conclusions contained in the conclusion paragraph. The sentence also contains the writers' assessment about improving the ability to learn to speak English that is good for children by watching TV. In addition, the sentence is the final solution given by the writers from some of the previous arguments contained in the essay. One of the arguments contained in the essay is "*These stories use the immersion method, which is based on the way children learn their language. They will be a lot of phrases and how to speak in daily such as shows greetings, telling the time, counting and much more*" (*3rd essay document, Body paragraph*). This is in accordance with the strategies cognitive element of critical thinking that is making problem solving relationships with several relevant points of view. The second feature of critical thinking at the producing level is "*as a result*". The aspect of producing level in that sentence is producing an action that becomes a solution to the problem. The solution is to get the children into regular school for the reasons contained in the previous sentence. The previous sentence was "*They are also taught and educated by teachers who are experienced in their fields*" (*8th essay document, Body paragraph*). Producing logical estimates, conclusions, or interpretations is an element of cognitive strategies contained in the sentence. The last feature of critical thinking at this

level is *"thus"*. The expression appears as a form of conclusion or result of the problem. That's because *"According to Turkle (2012), intimacy of human relationships is replaced by technologies, leaving people lacking intimate and quality interactions with others"* becomes a problem, the next sentence becomes a result of the problem. The third sentence entirely reflects the element of cognitive strategies about explaining in detail about conclusions, beliefs, and problems, where the sentence explains in detail about the problem of the importance of social interaction intimacy which if replaced with technology will be believed to increase loneliness.

Feature of critical thinking cannot only be seen from the simple expressions, phrases, and words contained in the theory in chapter II. These expressions, phrases and words are for reference only. That's because there are still many simple expressions that might not be included in the theory. So, the researcher needs to use the elements of cognitive strategies in the theory of critical thinking as a consideration in determining the features of critical thinking in a sentence. In this study the researcher found several new expressions contained in the students' essays as the features of critical thinking. The finding of expressions, phrases, and new words as the features of critical thinking begins with how to read each sentence in the essay in depth to get the intent and points contained in the sentence. After getting a point from the sentence, the next step is to adjust to the elements of cognitive strategies that have been classified based on Bloom's taxonomy. Below are some of the new expressions that appeared in the students' essays as the features of critical thinking:

- a) Maybe cause payment for go to hospital is more expensive **than before**, lately many promotion and information from breaking news about offering alternative forms of medicine with the cheap payment and get heal soon. (*1st essay document, Introduction paragraph*,)

- b) However, I will **refute statement about** the positive perceptions of regular school from parents and children nowadays. (*8th essay document, Introduction paragraph*)
- c) The parents **say that** home schooling is much better, because their children can focus more all of the subjects. (*12th essay document, Body paragraph*)

The first example of expression is "*then before*" at the differentiating level. That's because the meaning of the expression is comparing two things. While the contents of the sentence compare two things about the price of hospital treatment which is cheaper than now. However, the author does not provide a detailed explanation of the comparison of hospital costs between past and present. In the next sentence, the authors gave an explanation of the benefits of alternative medicine which shows that the cost is cheaper and the healing is faster. This is in accordance with the elements of cognitive strategies regarding identifying the different things in two things (contradiction). Then, it is collected to enter the differentiating level. An example of the second expression is the "*refute statement about*". The sentence contains the authors' assessment of the positive perception of regular schooling. The expression shows a negative rating, then it is classified at the evaluation level, especially on checking. The sentence shows that the assessment does not agree with regular schools. The next sentence contains the reasons why parents choose a regular school so their children can socialize well. In the end, the writer continues to deny the reason that not all students in regular schools have good personalities. This is proven in the following sentence "*In contrast, I think not all students in regular schools have good characters, so there is no assurance that the children can study comfortably without any interference*" (*8th essays document, Introduction paragraph*). The cognitive element that fits the second example is to check and assess predictions that are considered true (assumptions). The point is the writer gives a negative assessment of the regular school. While the third example is "*say that*" which is classified as

attribute level. That's because the expression has the meaning of expressing an opinion. While the contents of the sentence are some parents who say / think that home-schooling is better than a regular school. The reason given is that children can focus more on the learning process. The cognitive strategies element that supports this sentence is building one's perspective (making and exploring a theory, arguments, and beliefs).

When you find the features of critical thinking in the form of expressions, phrases, or words, it cannot be directly referred to as critical thinking. That is because every word needs to be understood regarding its meaning and content. As in the following example:

- a) Otherwise, regular school is very busy for example there is class discussion and all of the students cannot manage the situation, so make the situation is very crowd. (*12th essay document, Body paragraph*)
- b) Regular school is cheaper than homeschooling for example in regular school the parents pay just more than 30% and home schooling pay 80% it's so different. (*12th essay document, Body paragraph*)

Focusing on the features of critical thinking of the two sentences is "so". The word has a different meaning. The example in the first sentence has the features of critical thinking that is classified at the level of organizing and producing. One expression can be divided into 2 levels of critical thinking. The word "so" is a feature of critical thinking on the level of organizing as a reference in conjunction, where the word becomes a conjunction between two sentences. The first sentence is "*regular school is very busy for example there is a class discussion and all of the students cannot manage the situation*" and the second sentence is "*it makes the situation is very crowd*". The word also becomes a link between cause and effect. So, the word is also classified as a feature of critical thinking at the producing level, in which the writer makes a statement that the regular school has a lot of discussion activities and a lot of students (cause). Then, the writer makes a logical conclusion in the next sentence. The next sentence explains that regular schools have a very crowded situation because of the

many activities and students that are difficult to manage (as a result). This is supported by the appropriate elements of cognitive strategies that are producing logical estimates, conclusions, or interpretations. Based on the example in the second sentence, the word "so" cannot be called a feature of critical thinking. That's because the word is just an adverb in general. It does not show the feature of critical thinking and there are no elements of cognitive strategies appropriate to support it. Therefore, the word "so" does not always indicate the features of critical thinking, and it also applies to the other phrases or simple expressions.

If seen in more detail, each sentence in this essay consists of several features of critical thinking. In the sentence, more than one feature of critical thinking with different levels was found. In determining the level of critical thinking based on Bloom's Taxonomy theory, it must be based on the expressions contained in the theory, then adjusted to the elements of cognitive strategies. However, it is also necessary to understand the purpose and position of the expressions in the sentence. The following is an example contained in the essay:

"After government repaired the system of public transportation then the government must limit the number of motorized vehicles in Indonesia, raise taxes from vehicles motorized so that the people of Indonesia move using public transportation." (4th essay document, Body paragraph)

The sentence above has several features of critical thinking with different levels. Based on word order, the first feature of critical thinking is "after". The word shows the feature of critical thinking at the implementing level, which word contains the involvement with the next sentence which is an action in reducing private motor vehicles, so it is a consequence of government policy in improving transportation systems. The next feature of critical thinking is "then" which is classified at the executing level. The word "then" is a link that shows the action solution in the next sentence that is coherent. The word "so" is divided into two levels of critical thinking, namely organizing and producing. The word is classified as organizing

because it is a connector that organizes two sentences into one. The first sentence is "*After government repaired the system of public transportation then the government must limit the number of motorized vehicles in Indonesia, raise taxes from motorized vehicles*" and the second sentence is "*that the people of Indonesia move using public transportation*" (4th essay document, Body paragraph). In addition, the word "so" is also included in the producing level. That is because there is a link among the previous sentences which discuss government policy in reducing private vehicles (as a problem for people). So the writer makes a solution based on the perspective made by the government in the next sentence. This is in accordance with the element of cognitive strategies, namely making problem solving relationships with several relevant points of view. The last feature of critical thinking is "*that*". The word belongs to the organizing level. That is a reference in location and distance instruction.

B. Research Discussion

This section provides an overview of a discussion related to the findings. This study focuses on the features of critical thinking contained in essays made by the English Language Education students. It deals with research questions that have been formulated previously. The features of critical thinking refer to simple expressions, phrases, and words that show the features of critical thinking contained in essays based on the Bloom's Taxonomy theory presented in chapter 2.

Basically, a good essay is an essay that has completed all levels of critical thinking, specifically based on the level of Bloom's Taxonomy, where this theory consists of several levels that are structured systematically, starting from concrete to abstract levels and simple levels to the difficult level.⁹³ So, the sequence in the process of thinking is easier to achieve higher order thinking

⁹³ Sirous Tabrizi - Glenn Rideout, "Active Learning: Using Bloom's Taxonomy to Support Critical Pedagogy". Canada: *International Journal for Cross-Disciplinary Subjects in Education (IJCDSE)*, Vol. 8, Issue 3, 2017, 3

skills. Based on the findings from the analysis, there were 9 out of 10 sub cognitive processes that show the features of critical thinking contained in the essay writing made by the students.

1. Level of Features of Critical Thinking

There was one type of sub cognitive level that was not used in essay writing. It was at the planning level. Even though the students passed the planning level, they were able to use a more difficult level, namely the producing level. This finding confirmed previous findings by Kuhn & Dean that critical thinking arises when students find awareness of their own thoughts and reflections of other people's thoughts.⁹⁴ It refers to the students who were able to pass a level of critical thinking from the results of the development of their critical thinking in responding to the problems contained in the essay. Therefore, the students need help from the reflection of thought from the teacher to get to the level that was left behind before in order to obtain the level of perfect critical thinking.

The quality of the essay did not affect the number of features of critical thinking contained in the essay, but the features of critical thinking arose based on the way the students express their thoughts into written form. In addition, the features of critical thinking often appeared in the essays at the analyzing level, especially at the organizing level. Alternative word for organizing level is *finding coherence*. These findings are aligned with Oshima and Hogue's theory. Oshima and Hogue state that writing a paragraph must pay attention to the coherence or organization of a sentence. It aims to unite the sentence. Sentence transition one with the next sentence must be continuous. Every sentence should not have a sudden jump in writing a paragraph.⁹⁵ So, the findings and theory are reasonable. It is because the features of critical thinking at the organizing

⁹⁴ Amy G. Whitney- Leslie Wolfe-Cundiff- Allison Wyatt, "Re-Envisioning Bloom's Taxonomy: Developing Critical Thinking in the Writing Center". Kennesaw: *Unit of Academic Affairs*, 2

⁹⁵ Alice Oshima - Ann Hogue, *Writing Academic English Fourth Edition*, (New York; Pearson Longman, 2006), 21

level have many possibilities appearing in each sentence. It aims to organize sentences in writing essays. When compared with the results of the study by Thouqan Saleem Masadeh, it is very different.⁹⁶ The results of the study by Thouqan Saleem Masadeh explained that the coherence or organization of words was not applied well in the essays of Saudi students. It is because of the lack of knowledge about the features of organizing, so that the students are less able to express ideas in parallel. Besides, it is also because of the lack of transitional words or expressions. Some words and phrases can help strengthen relationships between sentences. A good paragraph is a coherence paragraph.⁹⁷ The way to build the coherence of a paragraph is that the students must combine one element with other elements into a unified unit.

2. Features of Critical Thinking

Features of critical thinking appear at a basic to high level. It starts from the level of executing, implementing, differentiating, organizing, attributing, checking, critiquing, generating, and producing. The first level is executing. These features of critical thinking often appear in the body paragraph. That's because the level of execution used procedural knowledge to problems, which they already knew in essays. The features of critical thinking that appeared in student essays were *then, first, second, third, firstly, secondly, to start with, final, and last*. Meanwhile, according to Vivien Perutz regarding the theory of critical thinking expressions in essay writing contains several expressions as follows: "*First(ly), second(ly), third(ly); to begin/start with; lastly/ finally; last but not least; ultimately; first and foremost; another; then; afterwards; first and most importantly; in the first/second place.*"⁹⁸ However, students were only

⁹⁶ Thouqan Saleem Masadeh, "Cohesion and Coherence in the Writings of Saudi Undergraduates Majoring in English", *Journal of Social Sciences and Humanities*, Vol. 5, No. 3, 2019, 206

⁹⁷ Jean Eggenschwiler, M.A – Emely Dotson Biggs, *Cliffs Quick Review™ Writing: Grammar, Usage, and Style*, (New York: Hungry Minds, Inc. 2001), 162

⁹⁸ Vivien Perutz, *A Helpful Guide to Essay Writing!*, (Cambridge: Student Services, 2010), 13

able to apply the level of executing using 9 expressions contained in the essay. So, the students only used expressions that were used by writers generally. In fact, students were able to use the same type of words to express at the executing level.

The second level is implementing. Based on the theoretical basis listed in chapter 2, simple expressions that might appear in the essay to show the implementing abilities include: “*Before; during; after; since; while working on the project; to begin with; next; once; till/ until; meanwhile*”.⁹⁹ The theory is confirmed by the findings of this research. Features of critical thinking found in student essays were: *after, before, since, during, and till*. However, students only used five expressions. It is used by students to apply at the implementing level. Looking at the five types of expressions used by students, it can be concluded that students lack extensive knowledge about how to apply the level of implementation in writing essays. This is evidenced by the 7 points of critical thinking that appear in 12 essays. This can be considered as indication of low critical thinking skill compared to the other levels.

The next level is differentiating. Many expressions can be used to apply the level of differentiation in essay writing. “*However; On the other hand; In contrast; alternatively; On the contrary; conversely; in comparison; rather; in fact; another possibility; better/worse still; but; despite this; notwithstanding; in spite of; nevertheless; for all that; yet; all the same; instead; although*” are some of the differentiating expressions taken from the theory of critical thinking expressions in writing essays by Vivien Perutz.¹⁰⁰ Some of these expressions were also used by students to write essays in finding. The expressions were *then before, although, than, rather than/rather, however, but/but also, on the other hand, in contrast/contrary, beside, even though, in other sides, not only but also,*

⁹⁹ The Learning Centre, “Linking and Reporting Words”, *James cook University Australia*, (https://www.jcu.edu.au/_data/assets/pdf_file/0003/218631/Linking_reporting_words.pdf, accessed March 29th, 2019)

¹⁰⁰ Vivien Perutz, *A Helpful Guide to Essay Writing!*, (Cambridge: Student Services, 2010), 11

better/better than, nevertheless, similar, and same. The theory with the finding had differences. There was a new expression as a feature of critical thinking at this level. The new expressions are *then before, than, beside, even though, not only but also, similar, same.* The use of these new expressions can occur because the type of essay created by students was argumentative essay. Hence, many students used the expression of the features of thinking to distinguish one argument from another. Automatically, students think critically to get new expressions.

Organizing is the next level. The level of organizing is the process of combining several elements into a coherent whole. Basically, the level of organizing is divided into four parts. Based on the findings, the features of critical thinking that appeared in four parts. Those are references in the category of people (*they, them, it, my, I, its, their, we, our, you, your, he, her, his, himself, own, and yourself*) and references in location and distance instructions (*this, there, that, those, these, now, and here*). In addition, references in the replacement of an element in a text (*One and some*) and references in conjunction (*And, for, so, or, yet, not only, but also*). This finding supports theories from Job, Seken K and Suarnajaya W. The theory explains the expressions that students can use in making structured and coherent essays.¹⁰¹ The expressions are *I, me, you, we, us, him, she, he, her, they, them, and it / my, you, your, his, her, her, their, their, its / mine, his, theirs* (as reference in the category of people) and *this, that, these, those; here, there, now, then* (as reference in location and distance instructions). In addition, the next expressions are *One/ones* and *some* (as reference in the replacement of an element in a text). The last expressions are *and, but, for, or, neither, nor, not only, so, yet* (as reference in conjunction). Students used it to organize sentences in essays. Seeing the findings, students were able to apply organizing skills well by using 4

¹⁰¹ Ayub - Seken K - Suarnajaya W, "An Analysis of the Cohesion and Coherence of Students' English Writing at the Second Grade of SMAN 1 Labuapi West Lombok", Singaraja: *e-Journal Pascasarjana Universitas Pendidikan Ganesha*, Volume 1, 2013, 3

sections at the organizing level. Good organization will make the essay easier to understand.

Attributing is an important level in critical thinking theory. According to theory, expressions that can be used to indicate attributing abilities are “*X suggests / argues / states / believes / concludes / proposes that...; X expresses / holds the view that...; X draws attention to...; X describes how...; X refers to...; According to X; There is a view / theory / argument that...; One view, expressed by X is that...; As stated / suggested / argued / proposed by X.....*”¹⁰² These expressions helped students in presenting a point of view, opinions, and suggestions in essay writing. In fact, the findings of this study are in accordance with the theory. The following expressions that students used in essays were: *stated that, argue/argue that, other view, based on, claim that, suggested, say that, according to, believe that, would like to say that, and perception*. Some new expressions were found on high quality essays. These are *other view, based on, claim that say that, believe that, would like to say that, and perception*. The difference in some new expressions arises because of the development of attributing abilities. So, students were able to reach the attributing level by developing these expressions with their own sentences.

Besides making a point of view and opinion, giving an assessment of a problem also includes critical thinking. It is called checking level. At the level of checking, students give positive or negative responses to a problem to get a conclusion. This level is quite difficult. To give a positive assessment, students used the following expressions: *should be, prefer, encourage, and agree*. While negative assessments were expressed with the following expressions: *i am disagree, denying that, complain that, in contrast, refute statement about*. Vivien Perutz states that expressions that show the features of critical thinking at the level of checking are: “*This is supported by x....; this is reflects the view / theory / suggestion of x.....; x*

¹⁰² Vivien Perutz, *A Helpful Guide to Essay Writing!*, (Cambridge: Student Services, 2010), 19

*accepts / supports / agrees with / concurs with this view / suggestion / theory....; a similar view is held by x... (Positive assessment agree about something) dan This conflicts / contrasts with / is contrary to the view held by x...; this is not accepted by / has been challenged by x.....; the opposite / a conflicting view is expressed by x..... (Negative assessment / disagree about something)."*¹⁰³ The findings and theories have quite different expressions in showing the features of critical thinking in the essay. It is because the students give an assessment of a problem using their own sentences. However, students lack knowledge in expressing checking abilities with diverse expressions.

The evaluation of a product based on certain criteria and standards is a critiquing process. In essays, students provide an assessment of a problem that is general. Based on the findings, the following were expressions that indicated the level of critiquing: *in my opinion, think/think that, mention that, and feel that*. This is quite different from the theory contained in chapter 2. "*It appears to me that the author...; in my opinion, the article...; the concept presented by the author is intriguing / innovative in that it...; the arguments the author presented are inadequately supported...; the article accurately / inaccurately portrays/presents*" are an expression that shows the ability of critiquing based on the theory from Dr. Elaine Khoo.¹⁰⁴ Students delivered assessments using general expressions. It occurred because of the lack of vocabulary that is owned by students. So, students did not give a variety of expressions that indicated critiquing ability. However, the students developed critiquing skills using their own writing style. It is indicated by the following expressions: *think/think that, mention that, and feel that*.

¹⁰³ Vivien Perutz, *A Helpful Guide to Essay Writing!*, (Cambridge: Student Services, 2010) 19

¹⁰⁴ Dr. Elaine Khoo, "Expressions Showing Evaluation Useful Sentence Stems for Summary and Critical Review", *The Writing Centre University of Toronto*, (<https://www.utoronto.ca/twc/sites/utoronto.ca/twc/files/resource-files/xSentenceStems.pdf>, accessed on March 30th, 2019)

In addition to providing an assessment, students must also be able to make solutions to the problems contained in the essay creatively. Another difficult level is the generating level. The students have applied generating levels in essay writing by using certain expressions. The following expressions were *if* and *might*. The two expressions were features of critical thinking. It showed that students were able to make a possibility in solving a problem contained in the essay. Adrian Wall work claimed that the expressions which might appear to make a possibility become a choice are as follows: “*If it would be possible...; my preference would be for...; x would be ready to...; x my preference would be for...*”¹⁰⁵ The expressions found in theory and discovery were different. However, it still had the same meaning that students were able to show the level of generating. The students applied this level more simply by using simple expressions.

The final level that students were able to achieve was the Producing level. The students used several simple expressions such as *so, sum up/ to sum up, in short, therefore, the result/as a result, in conclusion/as the conclusions, overall, and thus* as features of critical thinking at the producing level which involves concluding and solving problems. This is similar to the theory in chapter two. Vivien Perutz discusses expressions that can be used to make conclusions in solving problems in essays.¹⁰⁶ The expressions include: “*So; therefore; accordingly; thus; hence; in conclusion; in short; consequently; to conclude; in brief in all; it might be concluded from this; as a result/ consequence*”. So, there were some new expressions as features of critical thinking at the level of producing. The students used more variations of expressions that indicate the level of producing. These variations include, *overall, sum up/ to sum up and in short*. It showed that students were able to develop the ability to make conclusions and solve solutions when writing essays.

¹⁰⁵ Anthony Elloway, *Grammar for Academic Writing*, (Scotland: English Language Teaching Centre University of Edinburgh, 2013), 36

¹⁰⁶ Vivien Perutz, *A Helpful Guide to Essay Writing!*, (Cambridge: Student Services, 2010), 12

The students' critical thinking skills develop indirectly, when writing an essay. According to Kowiyah, critical thinking is a way of thinking about all the problems, which increases a person's ability to think in a structured manner and apply his intellectual basis.¹⁰⁷ Thus, critical thinking skills arise when the students respond to problems and provide arguments in essays. Data from this research show that the features of critical thinking are not only located in the body of the paragraph, but also located in the introduction paragraph and conclusion paragraph in an essay. This finding supports the theory that the analysis of critical thinking patterns (inference, interpretation, analysis, evaluation) appears at the beginning or opening of an essay, especially in argumentative essays. Critical thinking is also referred to as problem solving and creating conclusions.¹⁰⁸ Inference, interpretation, analysis, and evaluation are part of Bloom's taxonomy. Inference and interpretation are a small part of the level of understanding. While analysis and evaluation are levels in Bloom's taxonomy theory which are critical thinking patterns. If critical thinking patterns (inference, interpretation, analysis, evaluation) appear in a sentence, then, the features of critical thinking will appear in the sentence automatically. Generally, the creation of conclusions is located at the end of the conclusion paragraph. Therefore, the features of critical thinking can be found in the whole structure of essay writing, starting from introduction to conclusion paragraph (see appendix 3 of analysis result).

The results showed that the features of critical thinking are not based on phrases and simple expressions as features of critical thinking. The findings are supported by the theory of Watson & Glaser.¹⁰⁹ According to

¹⁰⁷ Anggia Rizki Permata Muslim - Iyon Suyana, "Analisis Kemampuan Berpikir Kritis Siswa SMA pada Materi Momentum dan Impuls", *Prosiding Seminar Nasional Fisika (E-Journal)*, Volume 8, 2019, 2

¹⁰⁸ Silvia Marni – Suyono - Roekhan, "Critical Thinking Patterns of First-Year Students in Argumentative Essay", *Journal for the Education of Gifted Young Scientists*, 12

¹⁰⁹ Riza Oktari Putri, "Investigating the Link between Critical Thinking Skill and Argumentative Writing Skill: The Case of Islamic Senior High School", *Edukasi Jurnal Pendidikan dan Pengajaran*, Volume 5, Number 2, 2018, 146

this theory, critical thinking is a person's skill in analyzing and identifying a problem in detail which aims to provide an assessment of related conclusions. Looking at that theory, it is concluded that critical thinking does not arise because of the expression that shows the features of critical thinking. However, critical thinking occurs when the writer analyzes and identifies a problem. The features of critical thinking can also be found by paying attention to the position of words in sentences and the cognitive strategies element.

Overall the findings from this study highlight that in terms of critical thinking based on Bloom's taxonomy, the students' critical thinking is featured in their expressions and phrases that are aligned with critical thinking theory. It shows that students are able to reach a level of critical thinking based on Bloom's Taxonomy theory in essay writing, even though they have not mastered it as a whole. There are also new findings in this research in that students also use new expressions to show the results of the process of critical thinking about a problem discussed in the essay. This indicates that in Indonesian EFL context, those expressions occur to enrich information about features of critical thinking in non-English speaking countries. In addition such new findings also can be a starting point for future research on features of critical thinking in other Indonesian EFL contexts or other contexts of EFL in other countries.

CHAPTER V

CONCLUSION AND SUGGESTION

This chapter provides two parts, namely conclusions and suggestions according to the study. The conclusion presents a brief explanation of the essence of the findings obtained from the results of the analysis. In addition, this study provides some useful suggestions regarding this research.

A. Conclusion

From the results of the analysis that has been done, this study provides some data in the form of features of critical thinking on the students' essays based on Bloom's Taxonomy theory. The following are some important points that can be concluded.

Based on the results of the study, essays made by the students showed the features of critical thinking. It starts from sub cognitive processes at executing, implementing, differentiating, organizing, attributing, checking, critiquing, generating, to producing levels. However, the students passed one sub-cognitive process, namely producing level. The level of critical thinking that often arose in the students' essays was the organizing level. In addition, the features of critical thinking are not only found in the body paragraph, but also in the introduction and conclusion paragraph. The levels of critical thinking cannot be determined just by looking at the words, phrases, or simple expressions contained in the theory. However, it must look at the contents and purpose of the sentence. Then, it is aligned with the elements of cognitive strategies in critical thinking theory. In general, one sentence in the students' essays has more than one feature of critical thinking. This shows that the students lack mastery of critical thinking theory to be applied in essay writing. The features of critical thinking can appear more than one if it is based on the situation contained in the sentence.

B. Suggestion

Based on the findings, this study provides the following suggestions.

1. For the students

The data shows that one sentence in the students' essays has more than one feature of critical thinking. So, that sentence does not focus on one level of critical thinking. Hence, it is suggested that the student should understand critical thinking theory. Then, they can develop their level of critical thinking by looking at the features of thinking that they have not known before. In addition, this study provides an overview on the students about the level of critical thinking.

2. For the writing lecturers

The data highlight that in terms of critical thinking, the students' level is mainly in organizing. Therefore the lecturers in writing class should provide a more detailed explanation of the theory of critical thinking, as reasons why they should criticize a problem, how to think critically when writing essays, what are the features of critical thinking in the essays, and others. So, the students are able to achieve the perfect level of critical thinking.

3. Suggestion for future research

The conclusion from the data shows that students only write essays, without knowing about critical thinking theory in depth. Therefore, future research pays more attention to the background of the object. If the future research takes the topic of critical thinking, it is suggested to take data from the students in the final semester who know better about critical thinking theory.

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