

Chapter two

Literature Review

As stated in the previous chapter, the aim of this research is to investigate whether students' critical thinking affects students' skill in writing argumentative text. Therefore, the discussion in this chapter focuses on experts' opinion related to the literatures of critical thinking skill, concept of writing skill, argumentative writing, and related studies will be highlighted in this chapter. The theoretical framework of the study is also explained in this chapter.

Critical Thinking Skill

There are four topics that will be discussed in critical thinking skill. Those are definition of critical thinking skill, critical thinking process, critical thinking level, and significances of critical thinking.

Definition of Critical Thinking Skill. Many different perspectives about critical thinking has been mentioned by various educators. According to Taghva, Rezai, Gadheri, and Taghva (2014), one of the most important methods of creativity seeking among students is critical thinking. From this statement, it can be considered that critical thinking is an activity to students for producing something based on their perspective. Meanwhile, Elder and Paul as cited in Shirkhani and Fahim (2011) stated that critical thinking refers to the ability of individuals to take charge of their own thinking and develop appropriate criteria and standards for analyzing their own thinking. It means that critical thinking can be defined as ability to decide, create, and examine something in detail.

Similarly, Nugent and Vitale as cited in Fahim and Pazeshki (2012) stated that critical thinking involves purposeful, goal directed thinking in a process of making decisions based on evidence rather than guessing in scientific problem solving process. Thus, critical thinking ability is one of way to take choice that person makes about something after thinking about several possibilities.

On the other hand, critical thinking requires the used imagination for seeing things from perspectives other than our own and envisioning the likely consequences of our positions. It is in line with Barnet and Bedau (2011) who stated that thinking critically involves two activities. Those are analysis and evaluation. This statement is also supported by Akyüz and Samsa (2009), by saying that one of the aspects of critical thinking is the ability to analyze, understand, and evaluate an argument.

To sum up, based on definition and explanation above, critical thinking skill is regarded as an art or ability to contemplate mind for criticizing, analyzing, and evaluating an issue or subject in positive side and negative side. It is a way to build creative thinking from investigating ideas to making judgment into own perspective. Critical thinking also becomes a basic thing in creativity seeking.

Critical Thinking Process. There are six core processes of critical thinking. Based on Facionce (2011), core of critical thinking consists of interpretation, analysis, evaluation, inference, explanation, and self-regulation. It is in line with Ruggiero (2004) who stated that there are some activities of thinking. They are investigation, interpretation, and judgment. On the other hand, Facione as cited in Snyder and Snyder (2008) stated that there are six steps to

effective thinking and problem solving. Those are identifying the problem, defining the context, enumerating the choices, analyzing option, listing reason explicitly, and self-correcting. This problem solving step guides the students through the critical thinking process and utilized learner collaboration.

Critical Thinking Level. Critical thinking involves six levels in thinking. According to Bloom Taxonomy as cited in Duron, Limbarch, and Waugh (2006), higher order of thinking consists of six levels. Those are knowledge, comprehension, application, analysis, synthesis, and evaluation.

The following table explain more about Bloom Taxonomy (1956)

Categories	Explanation
1. Knowledge	The level of thinking that requires an answer in demonstrating simple recall of fact. Locating knowledge from long term memory
2. Comprehension	Understand meaning of information. Construct meaning from instructional information, including answer that demonstrates a comprehending message.
3. Application	An ability to use message, ideas, and theories in a given situation.

4. Analysis	A skill to see way of achieving things and classify information, ideas, and theories into component parts.
5. Synthesis	An ability to create or decide original product.
6. Evaluation	An ability to evaluate or make a judgment based on sensible reason.

In addition, critical thinking based on Bloom Taxonomy 1956 revised by Anderson and Krathwohl (2001) as cognitive domain of critical thinking. The differences between Bloom Taxonomy(1965) and revision by Anderson and Krathwohl (2001) are based on model namely on the form of level name (noun to verb). Anderson and Krathwohl (2001) state that cognitive process dimension consists of remembering, understanding, applying, analyzing, evaluating, and creating.

Remember. The original verb from Bloom Taxonomy (1956) is knowledge, but it was renamed as remember. In this step, there are two processes, recognizing and recalling. Recognizing is a way to know someone or something because you have seen, heard, or experienced them before. After recognizing, the next process of this step is recalling. It is a way to bring the memory of a past event into your mind, and often to give a description of what you remember.

Understand. Determining the meaning of instructional message, including oral, written, and graphic communication. In this categories, there are seven

subcategories in understand. Interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining are subcategories in understand. Interpreting is a way to decide what the intended meaning of something is. Exemplifying is a way to be or give a typical example of something. Classifying is a way to divide things or information into groups according to their type. Summarizing is a way to express the most important facts or ideas about something or someone in a short and clear form. Inferring is a way to form an opinion or guess that something is true because of the information that you have. Comparing is a way to examine or look for the difference between two or more things. Explaining is when you have to explain or give a good reason for your actions. In addition, the highest subcategories in understand is able to explain. It means, the learner really understands when they can explain something.

Apply. It is about carrying out or using a procedure in a given situation. There are two main subcategories in apply, that is executing and implementing. Executing is a way to do or perform something, especially in a planned way. After executing, the next subcategories is implementing to put a plan or system into operation.

Analyze. It is about examining something in detail, in order to discover more about an issue. Analyze is divided into three subcategories. There are differentiating, organizing, and attributing. Differentiating is a way to show or to find the difference between things which are compared. After differentiating, the next subcategories in analyze is organizing. In organizing to determine how

elements or function within a structure. The highest subcategories in analyze is attributing. It is a way to think something has particular quality or feature.

Evaluate. It is about making judgment based on criteria and standards. The criteria and standard can be measured by checking and criticizing. Checking is to make certain that something or someone is correct, safe or suitable by examining it or them quickly. Criticizing is a report of something such as a political situation or system, or a person's works or ideas, which examine an often negative judgment.

Create. It is a way to put elements together to form a coherent or functional whole. In high order of thinking, create by considering generating to cause something exist, plan by act or decide how to do something, and producing to make something or to bring something into existence.

These two kinds of Bloom taxonomy only have little difference on model namely from noun to verb. However, this study will use revised Bloom Taxonomy as basic theory in developing this research.

Significances of Critical Thinking. Critical thinking is a framework for any discipline. Based on Bassham, Irwin, Nardone, and Wallace (2011), Critical thinking is valuable in many contexts outside the classroom and the workplace. It is in line with Hatcher and Spencer as cited in Duron et al. (2006) who stated that critical thinking is needed in the workplace as an essential and important skill. It can support people to deal with mental and spiritual problem, and it can be used to evaluate people, policies, and institutions, thereby avoiding social problems. It means that critical thinking skill have contribution toward any dicipline. In

addition, skill in critical thinking will help people to be more exact and accurate in nothing what is relevant and what is not (Cotrell, 2011). It means that with critical thinking, people will be specific and accurate in deciding something.

In education field, language learners who have improved critical thinking skills are able to do activities of which other students may not be able (Shirkhani & Fahim, 2011). In addition, Mahyudin, Lope, Elias, and Konting (2004) as cited in Shirkhani and Fahim (2011) stated that the language learner with critical thinking skill are capable of thinking critically and creatively to accomplish purposes of the courses. Accordingly, this is essential for educational field to help the learner become a critical thinker by applying it as the purpose of learning.

In English for Foreign Language (EFL), students need critical thinking to improve their language proficiency. Fahim and Sa'eepour (2011) argued that teaching critical thinking skills in EFL context can improve language learning. It is by containing critical thinking skills in language classroom. In addition, Liaw (2007) argued that the English language learners need to practice critical thinking in all domains. To sum up, based on argument of researchers above, the EFL teachers have a responsibility to gain student's critical thinking with practice in each course to improve language proficiency.

Writing

Writing is one of four major language skills. There are two topics that will be discussed at this section. Those are definition of writing, and aspect of assesing writing.

Definition of Writing. Writing is one of productive skills from four basic skills in English proficiency. Writing is a complex activity involving many skills to determine ideas and to transfer the ideas onto a piece of paper clearly and comprehensibly for the readers (Brown, 2007). It means that writing is one of language skill that needs extra effort for learner because the learner should master many varieties of writing as well as engaged into complex learning process. According to Brown (2007), writing is a complex process which involves a result of thinking, drafting, and revising procedures. By this definition, writing includes complex skill in English, because it is a productive skill and involves higher order of thinking in writing process. According to Turk and Kirkman (2005), writing must transfer ideas and information to other people. It means that writing plays a role as communication tool to transfer ideas into accurate information.

Aspect of Assessing Writing. Assessing students' writing need evaluation checklist to measure students' ability in writing. The evaluation checklist can indicate to students their areas of strength and weakness. According to Brown (2007), there are six general categories are often basic for evaluation students writing. They consist of content, organization, discourse, syntax, vocabulary, and mechanics.

Content. the content related to the ideas are contained in a piece of writing. It also include thesis statement, development of ideas through personal experience, illustration, facts, opinions, and consistent focus. The scale score of content for writing assesment are 0-24 point.

Organization. Organization in writing is an activity to arrange the effective writing. It is also included of effective of introduction, logical sequence of ideas, conclusion, and appropriate length of text. The scale score of organization for writing assesment are 0-20 point.

Discourse. Discourse is a piece of writing about topic sentences, paragraph unity, transitions, discourse makers, cohesion, rhetorical conventions, reference, fluency, and variation. The scale score of discourse for writing assesment are 0-20 point.

Syntax. Syntax is about grammatical term. The grammatical arrangement of words in a sentence. The scale score of syntax for writing assesment are 0-12 point.

Vocabulary. Vocabulary is all the words which exist in a particular language or subject. In writing, students have to pay attention in vocabulary choice for appropriate sentences. The scale score of vocabulary for writing assesment are 0-12 point.

Mechanics. Mechanic of writing included spelling, punctuation, citation of references, neatness, and appearance. The scale score of mechanics for writing assesment are 0-12 point.

Based on six aspects of assesing writing above, the researcher conclude that evaluation of student writing can be measured through various aspects and rating scales. The total high score for all of evaluation is 100 point. Hence, the evaluation checklist will help the teacher to assess the students' writing as fairness and reliability in evaluation.

Argumentative Writing.

Argumentative writing is one genre of writing. Giving argument to prove the fact or information in written form is a goal of argumentative writing. It is in line with Hillocks (2011) who states that the aim of creating an argument is to assure an audience or reader of the rightness of the claims being made using logical reasoning and relevant fact. It means that the writer gives evidence to assure the reader to achieve the goal of writing. In addition, argumentative writing is a kind of critical thinking and rhetorical production involving a claim, supportive evidence, and assessment of the warrants (Newel, Vanderheide, Olsen, & Team, 2013). Accordingly, argumentative writing plays significant role as a way to think critically and prove the reader with rationally truth.

There are five basic conceptions in argumentative writing. It is in line with Toulmins as cited in hillocks (2010) who stated that Toulmins' basic conception of argumentative writing consists of several elements. There are claims based on evidence, with warrant that explain how evidence prove the claim, backing prove the warrant, qualifications, and rebuttals that refute contending claims. Hence, argumentative writing needs evidence to support the argument that you write on it. Argumentative writing conception demands learner to activate their thinking skill. It will support the evidence by determining material qualifications that assure the reader should be included in their writing.

Critical Thinking in Argumentative Writing

Based on the definition of writing above, writing is closely related to critical thinking skill. According to Deane, Odendahl, Quinlan, Fowles, Welsh, and Tatum (2008), students should be able to use writing as a vehicle for critical thinking. Accordingly, a teacher should assess students' writing to integrate critical thinking in writing. It is in line with Horger (2013) who stated that to produce good writing, students have to be able to generate more cohesive and coherent argument about literature. It means that, critical thinking will give impact of process of honing an argument over the writing product.

Furthermore, thinking, organizing, re-thinking, and re-organizing are a continuous process of writing. Based on Cottrel (2011), writing skill need critical thinking. Those are involve process of providing reason, using evidence, comparing and evaluating arguments, weighing up conflicting evidence, and forming judgments on the basic evidence. It means that in a writing process the students are required to use critical thinking.

According to these experts' opinion, critical thinking and writing have strong relationship. When students have a good critical thinking skill, they will be easier in creating ideas and evidences for producing writing. They will have to know how to decide idea, analyze, make argument with evidence, and apply other critical thinking aspect that help them in writing process.

Related Studies

The following are the previous studies related to the variable of the present study composing critical thinking skill and student skill in writing argumentative text. First a study entitled *The Impact of Teaching Critical Thinking Skills on*

Reading Comprehension of Iranian EFL Learners was conducted by Fahim and Sa'eepour (2011). The study was conducted to investigate the impact of teaching critical thinking skill on reading comprehension ability by applying debate on EFL learners. It was carried out in English Institute in Karaj Iran. The total of participants were 60 intermediate students. The instrument is used Nelson test. The reading comprehension and a critical thinking appraisal post test were administered to the two groups. During the term, experimental group received 8 sessions of treatment using debate. To compare the two group they were given the same test as post test. The result showed significant difference between two groups on reading comprehension test, but the difference on critical thinking test was non-significant.

The next study entitled *Content-Based Reading and Writing for Critical Thinking Skills in an EFL Context* was conducted by Liaw (2007). It was carried out to find out the effectiveness of promoting learners' critical thinking skills and EFL skills with a content-based approach. It was conducted in junior high school in central Taiwan. There were 32 students, whose ages are 12 to 13 years old as the participant of the study. The method used in the study was experimental study. The participants of the study were divided into two groups, one being experimental and one being controlled. Data were collected from class assignments, a critical thinking assesment instrument, questionnaire, and a teacher-constructed language profeciency test. The result showed revealed significant gains in the students' English language proficiency test score. Critical thinking skills and content area knowledge mastery were also found. The result also show

positive responses toward the content based EFL learning and teaching from the participating students. Based on the result, instructional suggestions and caveats are provided.

In addition, *Learning to Improve: Using Writing to Increase Critical Thinking Performance in General Education Biology* was the next related study conducted by Quitadamo and Kurtz (2007). It was carried out at a state-funded regional comprehensive university in the pasific Northwest. The participants was non major undergraduates who was taking biology in their general education science requirement. The participants of the study were divided into two groups, one being experimental and one being controlled. An experimental group consisted of 158 participants and controlled group consisted of 152 participants. Data were collected by pre test and post test critical thinking assesment. The result showed the writing group (experimental) significantly improved in critical thinking skill whereas the non writing group (control) were not signify. Analysis and inference skills increased significantly in writing group but not the non writing group. Writing students also showed greater gains in evaluation skills, however these were not significant.

The previous studies above show the similarity with this research. The previous studies use quantitative approach for examining the relationship among variables. However, Sa'eepour (2011), Liaw (2007), and Quitadamo and Kurtz (2007) investigated the same variable of critical thinking and writing skills, they applied different design from this research. Their studies are categorized as an experimental design since those studies are intended to find out the impact of

critical thinking toward writing skill. this research can be considered that this research is not replica from the previous studies, instead it is an expansion as well as more specific research focusing on critical thinking and students' skill in writing argumentative texts as the variables of this research.

Conceptual Framework

This research focused on investigating the effect of students critical thinking toward students skill in writing argumentative texts at EED UMY Batch 2015. The researcher applied Bloom Taxonomy as the foundation of this research. Cottrell (2011) mentioned that there are three factors that influence students' critical thinking, such as knowledge, skills, and attitude. Bloom Taxonomy (1956) revised revision of Bloom taxonomy by Anderson and Krathwohl (2011) require the higher order of thinking that characterizes critical thought. He arranged the hierarchical structure of cognitive process dimension consist of remembering, understanding, applying, analyzing, evaluating, and creating. Additionally, according to Brown (2007) the product of compositional nature of writing has produced writing pedagogy that focuses how generate ideas, organize coherently, use discourse makers and rhetorical conventions to put them cohesively into written text, revise text for clearer meaning, edit text for appropriate grammar, and product final product. Following figure 2.1 describes the estimated effect of critical thinking skills toward students skill in writing argumentative texts.

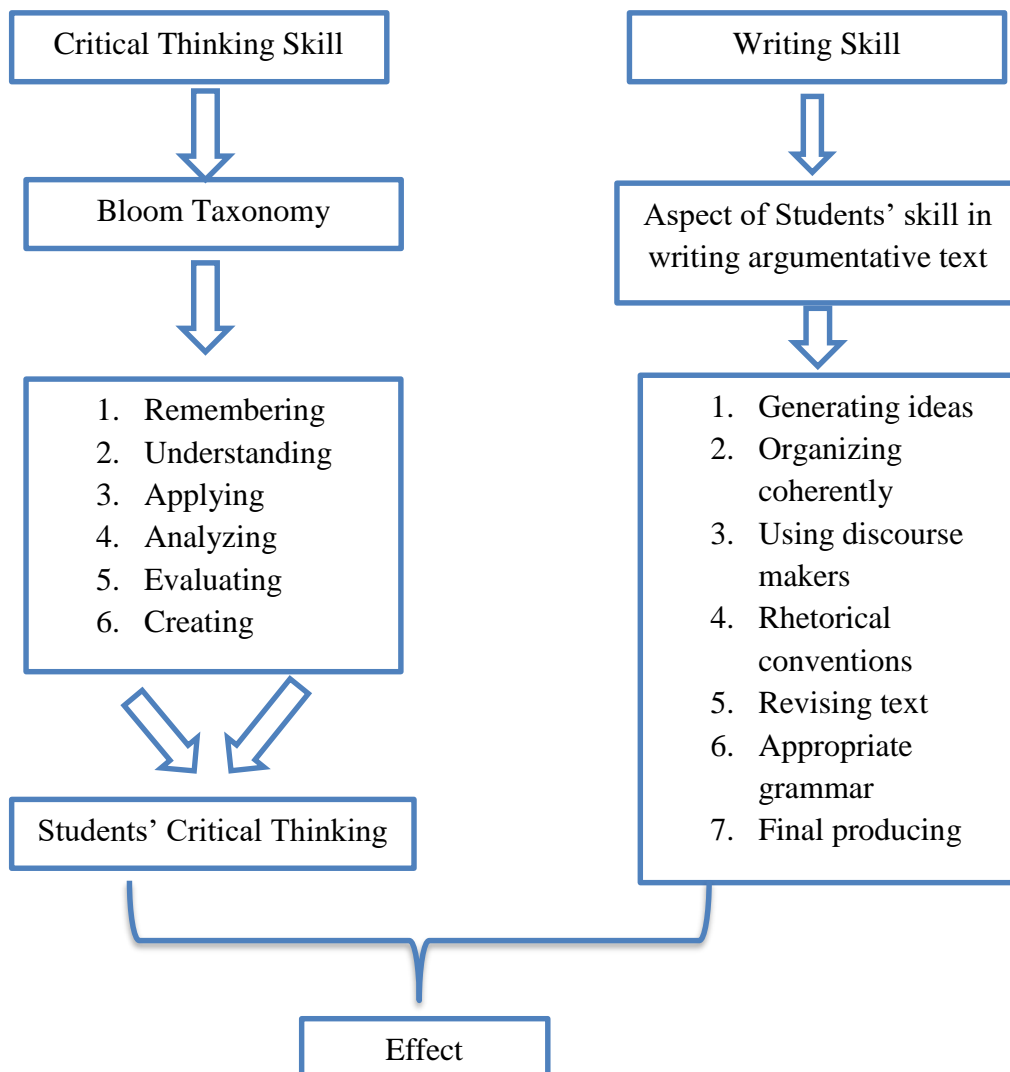


Figure 2.1 Conceptual framework of critical thinking skill and students skill in writing argumentative texts.

Figure 2.1 reveals that the effect of critical thinking skill toward students' skill in writing argumentative texts may be directly proportional. It means that if the students have a good critical thinking, they are able to be good at writing

argumentative texts. On the contrary, if students lack of critical thinking, they are poor in writing argumentative texts.

Hypothesis

This research proposes some hypothesis as follows:

1. Null hypothesis (H_0), there is no significant effect of English Education Department of Universitas Muhammadiyah Yogyakarta batch 2015 students' critical thinking skill toward students' skill in writing argumentative texts in Interpretive reading and Argumentative Writing Class in second semester.
2. Alternative hypothesis (H_a), there is a significant effect of English Education Department of Universitas Muhammadiyah Yogyakarta batch 2015 students' critical thinking skill toward students' skill in writing argumentative in Interpretive reading and Argumentative Writing Class in second semester.