

Chapter Two

Literature Review

Definition of Learning Activity

Activity is thing or things done (Oxford Advanced Learner's Dictionary, 2006, p.13). It means that activity happens when someone is doing something or many things. In addition, learning activity is students' activity that are expected to be able to enhance the students' learning result (Sardiman, 2004, p.96). Accordingly, learning activity is something done by the students in order to support their learning process.

According to Sardiman (2011), learning activity can be divided into eight parts. The first is visual activities, e.g. reading, demonstrating, noticing picture. The second one is oral activities. The third is listening activities, for example interview, delivering opinion, speech. The fourth is drawing activities, for instance drawing map, graphic, or picture. The fifth is motor activities, including gardening, playing, and experiment. The sixth is mental activities, for example analyzing, problem solving, responding or memorizing something. The seventh is emotional activities, e.g. happy, sad, enthusiasm, bored, calm, and the last is writing activities, e.g. writing story, writing poetry, writing report.

Definition of Critical Thinking

Critical thinking is an active process. It involves the process when people think of something in-depth by themselves, ask many possible questions toward themselves, try to find some relevant information, rather than accept most other arguments passively (Fisher, 2009). It can be said that critical thinking is an ability to construct knowledge by doing some reviews through thinking many possibilities and complete it with logical evidence or supporting information until it reaches a new argument. In line with that, Scott (2010) stated that critical thinking involves evaluation reasoning and factors considered in making decisions. It indicates that critical thinking involves the process of evaluating factors that may influence the decision making in a logical way. These definitions show that critical thinking has a strong correlation with metacognition.

As stated by Thomas (2011), an important aspect of critical thinking is metacognition which is being aware of how we think. Metacognition is awareness of what one knows as well as the ability to have a correct understanding about learning assignments in relation to the knowledge and skill being required; by having this, one will be able to draw appropriate inferences when applying particular knowledge in the problem solving process effectively and reliably (Taylor, 1999). Accordingly, critical thinking is the ability to think about one's own thinking. One does not merely answer particular questions based on providing answers, rather he or she is involved to use their metacognition to process their own knowledge to find the most appropriate

decision making, such as asking many possible questions toward themselves before setting argument, accepting other information by thinking of its logical reasoning, tend to use evidence when posing opinion or argument.

Critical Thinking based on Bloom Taxonomy (1956) revised by Anderson and Krathwohl (2001)-Cognitive domain of Critical Thinking

Bloom Taxonomy

There have been many different definition of critical thinking stated by many experts. Critical thinking cannot only be defined as the thinking skill which is delivering or responding particular argument based on evidence as stated by some expert in the discussion of critical thinking in the previous discussion, but also defined through level of thinking namely Bloom Taxonomy. Taxonomy is simply a word for a classification (Wilson,2015). Accordingly, Bloom Taxonomy provide a classification of thinking level represented by a word for each level of thinking.

Each Taxonomy must have different focus of domain to be classified. According to Anderson and Krathwohl (2001), Bloom Taxonomy provide thinking classification level namely cognitive domain. These cognitive domain includes of *knowledge, comprehend, application, analysis, synthesis, and evaluation* (Anderson and Krathwohl, 2001). According to Bloom Taxonomy, cognitive domain can be classified into the lower-order thinking and higher-order thinking. Lower-order thinking involves *Knowledge, comprehension and application*. Meanwhile, higher-order thinking covers *analysis, synthesis, and evaluation* . In Bloom Taxonomy,

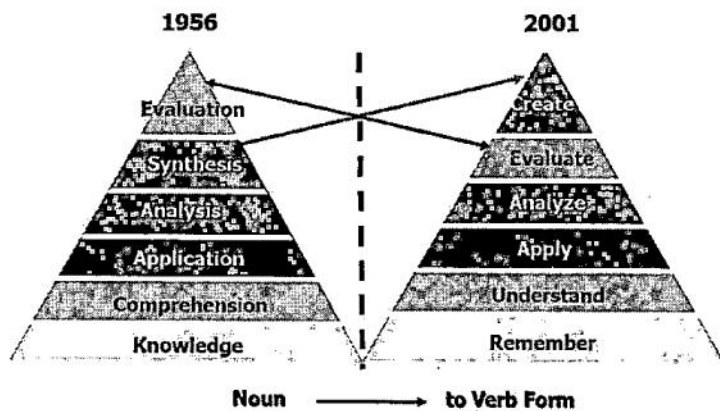
analysis is assumed to be the lowest and the least complex skill of higher-order thinking or critical thinking. The difference is the lower-order thinking is more passive in receiving the information and only uses the ability to memorize or having a simple understanding, while higher-order thinking tends to use the ability to actively and creatively process information into original ideas (Stratton, 1999, p.38).

This concept of critical thinking means that critical thinking is the ability that has covered up all the cognitive skill, starting from remember until create as the highest level of thinking, or at least it has reached analysis skill. Higher order thinking/critical thinking involves the ability to process information/knowledge actively. In contrast, lower-order thinking tends to accept information/ knowledge passively. As the conclusion, critical thinking is when someone can perform their ability to *analyze, synthesize, and evaluate*.

Bloom Taxonomy (1956) revised by Anderson and Krathwohl (2001)

As the taxonomy that has developed from more than 50 years ago, Bloom taxonomy have experienced some revisions made by Anderson and Krathwohl (2001). However, the changing is not too significant. The following pyramid can show the changing in more detail.

Figure 2.1. Original Bloom Taxonomy (1956) revised by Anderson and Krathwohl (2001)



Based on the above Taxonomies, it could be known that the first revision made by Anderson and Krathwohl (2001) is on the name for each level. The old Bloom taxonomy uses *noun* to represent each level of thinking, while the revised Bloom taxonomy use *verb* for each level of thinking skill. Secondly, the name of *synthesis* in the old Bloom taxonomy is changed into *create*. However, the meaning remains the same. The third revision is lying on the level of *evaluate* and *create* which replaces each other. In the Bloom taxonomy, *evaluate* is the highest level of cognitive skill and *synthesis* (*create*) is on the second highest level. In the other side, the revised Bloom taxonomy put *evaluate* level as the second highest level while *create* is in the top highest level (Anderson and Krathwohl, 2001).

The following table will explain more about Bloom taxonomy revised by Anderson and Krathwohl (2001).

Table.1. The Cognitive dimension table (pp.67-68)

| Categories | | Explanation |
|---|---|---|
| Remember : retrieve relevant knowledge from long-term memory | | |
| Remember, identifying | - | locating knowledge in long-term memory that is consistent with presented material |
| Recalling, Retrieving | - | retrieving relevant knowledge from long-term memory |
| Understand: construct meaning from instructional messages, including oral, written, and graphic communication | | |
| - Interpreting, Clarifying, Paraphrasing, Representing, Translating; | - | Changing from one form of representation |
| - Exemplifying, Illustrating, Instantiating; | - | Finding a specific example or illustration of a concept or principle |
| - Classifying, Categorizing, Subsuming, | - | Determining that something belong to a category |
| - Summarizing, Abstracting, Generalizing; | - | Abstracting a general theme or major points |
| - inferring Extrapolating, | - | Drawing a logical conclusion from presented |

| | |
|---|---|
| Interpolating Predicting Explaining; | information |
| - comparing, Concluding, Contrasting, Mapping, Matching; | - Detecting correspondences between two ideas, object, and the like |
| - Constructing models. | - Constructing a cause-and-effect model of a system |
| Apply: carry out or use a procedure in a given situation | |
| Executing, Carrying out; | - Applying procedure to a familiar task |
| Implementing, Using | - Applying a procedure to a familiar task |
| Analyze: break materials into its constituent parts and determine how the parts relate to one another and to an overall structure or purpose | |
| Differentiating, Discriminating, Distinguishing, Focusing, Selecting; | - Distinguishing relevant from irrelevant parts or important from unimportant parts of presented material |
| Finding, Coherence, Integrating, Outlining, Parsing, Structuring; | - Determining how elements fit or function within a structure |
| Deconstructing. | - Determine a point of view, bias, values, or intent underlying presented material |
| Evaluate: make judgment based on criteria and standard | |

| | |
|--|--|
| Checking, Coordinating, Detecting, Monitoring, Testing; | - Detecting inconsistencies or fallacies within a process or product, determining whether a process or product has internal consistency, detecting the effectiveness of a procedure as it is being implemented |
| Critiquing, judging | - Detecting inconsistencies between a product and external criteria, determining whether a product has external consistency, detecting the appropriateness of procedure for a given problem |
| Create: put elements together to form a coherent or functional whole; reorganize elements into a new pattern or structure | |
| Generating, Hypothesizing; | - Coming up with alternative hypothesize based on criteria |
| Designing, Planning; | - Devising a procedure for accomplishing some task |
| Constructing. | - Inventing a product |

These two kind of Bloom taxonomy only have a little difference toward its model namely on the form of level name (noun to verb), the changing name of *synthesize* into *create* and the replacement of create and evaluate level. However, this

study will only use the revised Bloom taxonomy as the basic theory in developing this research. Therefore, the definition of critical thinking is either the ability to *analyze* (Break material into some parts), *evaluate* (making judgment based on reason), or *create* (making original product or idea by combining some ideas).

Significance of Critical Thinking in EFL Learning

Critical thinking is the most valuable skill that schools can give to their graduates (Thompson, 2011). It means that critical thinking have a worth contribution toward students after they do not become a student anymore. It is valued as important educational outcome especially for those who attend higher and professional education. (Nirmala, 2011). Accordingly, this is necessary for the educational institution to help the students become a critical thinker by attaching it as the learning goal, because it will extremely contribute to the students' future life.

In EFL setting, critical thinking also plays a crucial role to promote students' learning. Meei (2007) argued that EFL teachers have a responsibility to provide opportunities for students to acquire critical thinking skills while learning English; without adequate practice to sharpen critical thinking skills, students will not be able to participate actively in the international community. This means that critical thinking need to be owned by EFL students in order to complete them when they are doing interaction in international scope. Therefore, teacher needs helping the students in improving their critical thinking skill by engaging them into some activities that lead them into critical environment.

In addition, the implementation of critical thinking teaching in EFL classroom will allow the learner not to only learn the foreign language, but also think and act critically as an autonomous person (Khatib et al., 2012). It can be said that even though language learning emphasizes on language acquisition, the critical thinking skill is also important to develop in order to help the students become an independent language learner.

Critical thinking involves the use of information, experience, and world knowledge in ways which allow second language learners to seek alternatives, make inferences, pose questions, and solve problems, thereby signaling understanding in a variety of complex ways (Meei, 2007). Accordingly, critical thinking in language learning has a significant role as in language learning. By having critical thinking the students can solve many complex problems in a variety of ways. That is why the teacher should help the students in optimizing it.

Definition of Writing Skill

In both native and foreign language, writing is assumed as one of the most difficult, multifaceted and complex skill to learn (Hashempour, Rostampour, & Behjat, 2014). It means that writing is one of the language skills that require an extra effort to learn it because the learner should master a wide variety of writing as well as engaged into complex learning process.

According to Negari (2012), writing is a complicated process which involves a number of cognitive and metacognitive activities, for instance; brainstorming, planning, outlining, organizing, drafting, and revising. By this definition, writing involves the ability to use our knowledge (cognitive) as well as control our knowledge in an appropriate situation or way (metacognitive). In line with that, the process of writing gives the author an opportunity to do a review of their own thinking processes by determining whether the materials used are able to provide for and whether the material needs to be revised or not (Moon, 2008,p.151).

Accordingly, writing process can help the learner to activate their thinking skill to make decision making by determining what material should be included in their writing. Based on the theories of writing, it can be drawn that as the language skill that has a high level of difficulty to learn, writing requires the writer to have a good quality of cognitive and metacognitive skill which means that they should not only have a wide knowledge but also the ability to use their knowledge in a proper way.

Critical thinking in Writing

Based on the definition of writing above, it seems that writing is closed related to thinking skill. As explained by Barnawi (2011) that in writing process the ability to analyze facts, produce and organize ideas, maintain opinions, make comparisons, judge arguments, and solve problems by the use of existing information, previous knowledge, experience, and world knowledge is assumed as

the process that allow students to develop their thinking skill to high order thinking skill/critical thinking. This indicates that in writing, the students can perform many writing process that allow them to perform critical thinking, for example when the students are engaged into the writing activity that require them to make argument/judgment, provide evidence to support argument, etc. In line with that, Cottrel (2005) stated that a writing skill that perform critical thinking involve the process of providing reasons, using relevant evidence, comparing and evaluating alternative arguments, weighing up conflicting evidence, and forming judgments on the basis of the evidence. It can be said that a writing process that perform critical thinking should at least perform the ability to use relevant evident in the process of making or opposing argument in their writing.

Furthermore, writing is a medium where students can express the ability to think critically and writing can be a reflection of students' critical thinking when they are involved in a variety of ways to use critical thinking (Dixon, Cassady, Cross, & Williams,, 2005). It means that the writing product can also represent how critical students are especially if the writing assignment leads the students to think critically. By these definitions, it can be known that critical thinking can be developed through writing activity, because in writing process the students are required to apply some critical thinking aspect.

Based on these theories, critical thinking and writing have a very strong relationship. When someone has critical thinking, they will be easier in producing writing because people will have known how to analyze, evaluate, making argument,

comparing, and performing other critical thinking aspects that may help them in accomplishing their writing project. However, critical thinking can also be developed through writing process, if someone is engaged into the writing activity that leads them to produce some critical thinking performance.

Writing activity to encourage critical thinking

Paul and Elder (2007) argued that students will be able to think critically when they are consciously and deliberately thinking through some dimension of the logic of the discipline they are studying (as cited in Zhiwen , 2013). In other words, students will have the ability to think critically when they are consciously and intentionally engaged into activities that require reasoning ability on the material they learned. There are many activities can be used by teachers to develop students' critical thinking skill in writing activity purposed by some researcher or author. Besides, Moon (2008) noted that there are many written activity to develop critical thinking and it divided into activity for beginner learner and activity for advanced learner.

For beginner

The following are the writing activity to promote critical thinking for beginner or the students who have just attended higher education.

The ability to write conclusion. There will be a piece of writing that includes critical aspect of the topic. The students need to evaluate the evidence existing on the writing and draw their own conclusion. By completing this activity, the students can understand more about the evaluation process as well as making conclusion. This

process requires the learner to be able to correlate evidence and another to create conclusion of the essay.

Taking different disciplinary perspective. There will be a topic or issue; the topic can be a fictitious topics and topics real problems. As an example: there will be a new road connecting the two regions, but the construction will be done by displacing a village. In this case, students are asked to make note of their own arguments, either the supportive argument or oppose the topic.

Making a judgments. Students will be asked to make a judgment on something that is unfamiliar to them as a work of art like the film, sculpture, or an aesthetic writings. When the student has make judgments, they are asked to identify what criteria they have value in the object, and then compare it with other students. The focus of this activity is that students are able to identify the results of judgment to determine which aspects / criteria of the thing they have valued. Making a judgment require the students to do analysis and evaluation toward the material they are learning, for this reason the students can get the benefit of having critical thinking (Van den Brink-Budgen, 2000,p.17)

Making a judgment, starting from another perspective. This is the continuity of the fourth exercise. After giving judgment to the unfamiliar thing directly, in this exercise the students are asked to give judgments toward others perception or judgments. The differences of both exercise is on the object of the judgment. In this activity, the students judge something from other perceptive. They are not giving judgments toward something by their own point of view.

For advanced Learner

The following are writing activities that can be used to promote critical thinking for students who have been studying at higher education.

The use of concept maps. The learner are asked to share their idea of particular topic or issue through concept mapping, then discuss the result of their concept mapping by comparing it to other students and trying to resolve it. According to Khodadady (2011), Concept mapping is the concepts that are usually rank ordered from the most general, most inclusive concept to the most specific, least general concept.

A fictitious debate. The students write a note that contains the structure of oral debate toward the given topic. They need to construct the point completed with relevant evidence as where they belong (whether they are agreed or disagree with the motion). This exercise could be done by an email group.

Practice of peer review skills. Mark an essay in which critical thinking is represented there will be a prepared essay which includes critical idea. The student are asked to identify it using a given criteria, then compare it to their friends' mark. This activity requires poor and good essay quality that the students can be learning directly from the good ones and the recognition of problems in reasoning in poor essays. The process of providing feedback on peers' work increases the opportunity of meaningful interaction with peers and maximizes the opportunity of sharing new ideas (Farrah, 2012b)

General writing exercises

The following are some more general writing activity can be used to support critical thinking.

Short-answer tasks. Learners are asked to respond to critical thinking tasks (e.g. to respond to short statements) in 300–400 words. This will force them to be precise and succinct in their writing and reasoning.

A demonstration that people understand things differently. The lecturer will tell a reasonably complex topic. The students are asked to take note about the topic. After that, the students will be asked to compare their note with their partner to compare their notes.

The identification of main points and important evidence. Students will receive an explanation of the evidence underlying a particular problem. Students are asked to summarize what was explained to them, especially the main points made, the judgment, and the nature of the supporting evidence.

Looking critically at one's own work – drafting and redrafting. A set of learner's writing (e.g. essays) is kept, or copies are made. After passing a period of time, the material is given back and learners are asked to edit the material, clarifying the points made and identifying what they would change now.

Learners write a discussion between two theorists (could be fictitious or real) about a topic in their discipline. Students are required to prepare evidence they will bring in discussions on the position obtained. In this activity, students will have two opposite positions on the same topic.

Review of Related Study

Different researcher or author has suggested different ways of increasing thinking skills among language learners in writing activity. Khatib et.al (2012) examined Audiotape and dialogue journal as journal keeping which is increasingly gaining popularity in EFL/ESL classrooms. The purpose of the research was to investigate the effect of both kind of journal keeping on the improvement of critical thinking. Participants in this study were 33 Iranian EFL learners in 3 intact classes. Those students was divided into two experimental group with different journal keeping (one group using audiotape dialog journal, the other group used written dialogue journal). Pre and post test was administered by the use of The Watson-Glaser Critical Thinking Appraisal -Form A (1). The result showed that teaching for critical thinking abilities through keeping dialogue journals improves students' critical thinking abilities as opposed to using ordinary English writing tasks.

Furthermore Sharaway (2014) had examined journal writing as the writing activity to promote the students critical thinking. This study was conducted to know the influence of journal writing as the additional activity toward students' critical thinking development. This research use quasi-experiment as the research method. The experiment was carried out with sixteen students belonging to experimental group and seven students as the control group. Students from both groups have the same level namely students in the first semester in one of the Egyptian private universities. Pre and post test were conducted to measure students' critical thinking.

Bloom taxonomy and the available critical thinking assessment tool become the basis to design an original assessment tool. The result showed that journal writing definitely promotes the students critical thinking in the experimental group with its valid assessment tool.

Based on these related studies, it can be seen that the studies only examined the influence of particular activity toward critical thinking by the use of experimental research method. In the other hand, the current study focused to investigate the existing writing activity that stimulates the students to promote their critical thinking. In this case, the researcher explored the critical thinking-oriented activities in writing class at EED UMY in deep way which is exploring the whole writing class activity (in particular subject) that promote critical thinking through students' information.

Conceptual Framework

This research focuses on critical thinking-oriented activity in writing course at EED UMY. There is the theory of Anderson and Krathwohl (2001) about the critical thinking. This theory is used to classify the critical thinking-oriented activity applied in writing class at EED UMY