

# Building Students' Critical Thinking with Questioning Exploration

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## **Building Students' Critical Thinking with Questioning**

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Questioning **ABSTRACT**

*students to be a critical thinker in their process of writing is hardly a challenge. As an effective process of writing depend on how well they develop their critical thinking skills, helping them build the critical thinking in writing is considered as a way to make a correct judgment independently and create an environment that raises their best writing. The current study attempts to investigate whether the use of questions could generate students' critical thinking in their writing process. The participants were 38 English Department students who encountered argumentative writing class in University degree. The subjects were assigned into a mix method on a quasi- experimental study involving pretest - posttest with some features of semi structured interview to know their level of satisfaction from the gained score. The results of the study showed that the significance of exploring questions in helping students' critical thinking for meaningful learning, especially in the connectivity and cohesiveness of their writing product and also the flow of the sentences.*

### **1.0 INTRODUCTION**

Some studies have indicated on the importance of critical thinking students have for their learning process. The qualification on getting an effective learning and productive living needs creative thinking (Belghiti K et al 2017). Students will get benefits in many areas of their academic life such as in reading activity, writing activity and also when they are working with peers (open university, 2008) if they entail the critical thinking skills in the decision making. Based on Bloom's Taxonomy, students used critical thinking and is supported by data through argument and integrated reflection during scientific analysis.

In writing, developing ideas is one way for students to fight the problems with writers' block. Writing needs procedures of analysis and a great deal of organization, as well as creativity, even though the concept for writing are already in their head. Therefore, how well the developing of the critical thinking will affect on the process of effective writing. Thinking critically is a step to create strong arguments and to present and to justify based on the evidence evaluated (open university 2008). One way to achieve this is through questioning. The function of questions generate students to entail in a process which force them in thinking, constructive in learning, and keeping in content, if drained in such a way in order to beat the process of thinking and stir the idea ( Smith, Rook, and Smith , 2008, p. 44). Tapper 2004 (in Vincke 2012) highlights the critical thinking as the name of the ability such as do the selection, make an evaluation, do an analysis, create a reflection, produce a questioning, do inference and judgment. Moreover, Santoso et al (2017 ) asserted that students' critical thinking skills has great connection with the ability on asking questions, where the levels of questions which play a significance function in critical thinking skills are on the levels of predictive, analysis, evaluation, and inference.

activities involving well- designed assignment (Cavdar, Doe 2012), problem- based learning (Chen & Li 2015), topic familiarity (Indah 2017) and the use of peer evaluation rubric in teaching (Daud 2012). In addition, a number of study has also expanded the use of teacher questions in the development of critical thinking skills. Posing teacher- led questions and answer approach that is considered as a good application on helping students in expressing the critical thinking skills (Lee, Da En 2015; Horowitz 2007; Etemadzadeh et al 2012) . However, there has been less research on applying students self questioning in developing the critical thinking skill. Therefore, this paper intends to investigate the development of students critical thinking from their self questioning in the writing performance which aims at the students' advance skills in questions formulation, actively in listening bustle to the others' point of view, identifying a good questions, constructing the difference various types of questions, expressing briefly their opinion, delivering argument, accepting others' ideas, constructing the empathy.

## 2.0 LITERATURE REVIEW

The theories presented in this paper will identify the different concept on critical thinking in many studies and discuss its role in writing skill. Questioning as part of the modes of critical thinking skills will also be explored in assisiting the development of writing skill.

### 2.1 The Description of Critical Thinking and Questioning

The views of critical thinking converge from some factors such as the individuals' capability to think and to decide independently, building the skills of argumentation, making correct judgment, border on problems from various points of view, has questioning path that construct the skills on higher order thinking and set in the middle point of an individual (Shirkhani & Fahim 2011, Cojocariu and Butnaru 2014, Islek & Hursen 2014). Therefore, the questioning approach can be undebatable as a powerful teaching method . Horowitz 2007 stated that the increasing of students' knowledge and their way of learning are influenced by the scope of the questions the teachers had on the improvement of the thinking critically and the ability of problem solving. When trying to support students' demonstration of their higher ord<sup>2</sup> thinking skill, questions section is considerably challenges to the learning environment. In order to improve thinking, reasoning, and critical thinking, Aflalo (2018) stated that it is important to develop questioning. The characteristics of questions make the individuals on having the cognitive demand to respon them (TEAL 2013). The best system for classifying the <sup>2</sup> cognitive level of questions is known with Bloom's Taxonomy proposed in Aflalo (2018) which offers a hierarchy of questions ranging from knowledge questions, expressing the lowest order of thinking, to comprehension questions, application, analysis, synthesis, and evaluation. This Bloom's hierarchical levels is also stated in TEAL (2013) that questions are classified into lower order questions that require students to remember the previous materials teachers gave to them and higher order questions that require students to impose the previous informations they hav<sup>1</sup> learned to create the answers in logically reasoned evidence. The use of that both lower and higher order thinking skills are crucially needed in the process of teaching and learning.

### 2.2 The Role of Critical Thinking in Writing

The attention of integrating writing and critical thinking in teaching have become the demand of many researchers as it is considered that this possible integrating plays an

important role in teaching and learning process . As Islek and Hursen (2014) indicated that the important of critical thinking in education is to teach the students to be productive, creative, and to have critical thinking ability. In order to get well- designed writing, students are

encouraged to reconsider thoughts, critically evaluate assumptions, and perform substantive revisions of their writing (Cavdar & Doe 2012). Therefore, it is important for teachers to understand the interconnection of the research as a conceptual foundation for embedding critical thinking and writing (Murray 2016).

Over the past few years, the articulated importance of connecting critical thinking with writing became the intention of many researchers as many teachers have expressed their dissatisfaction with the students' competence in both skills (Dong 2015). Jacobson and Lapp 2010 (in Murray 2016) find that even though the students are able to make sentences and summarize basic information, they are still struggle with the ability to arrange and produce ideas in a logical manner, to produce a logical connection of informations within a paragraph, and to analyze the causes and purpose solutions of problems critically. The lack of logic and critical analysis in students' writing stimulate many researchers to concern about the writing proficiency as well as the critical thinking competence. Many college students complete their study in the higher educational institute without obtaining the obligatory competence in writing and critical thinking (Borglin 2012).

The skill of critical thinking entail with another skill of the language skill. Just like Indah (2017) indicated that the application of critical thinking skills can be used to measure other language skills such as speaking and writing. The critical thinking skills inspire the researchers as the major point for their investigation among students of numerous levels and disciplinary background (Dong 2015). Sharadgah (2014) also claimed that the students' critical thinking skill will considerably developed when they try hardly with writing task. This point offers the critical thinking and its skills may build up the students' process of writing as they can boost the individual language learning.

The literature about writing in relation to critical thinking is in line with the findings of some study. For example, Indah (2017)) stated, the better contemplation of students' critical thinking derive from the more advanced writing skills they acquire with. It is also revealed from Dong (2015), The improvement of students' critical thinking scores is effectively produced from the result of their critical thinking in writing ability. Moreover, Cavdar and Doe (2012) encourage other instructors to acknowledge the writing approach to promote the advancement of better critical thinker.

### **3.0 METHODOLOGY**

The objective of this study was to assess the effects of questioning exploration to build students' critical thinking in their writing performance. In particular, the researcher examined whether the use of the questions exploration, in students' writing process, would impact on their written product.

The design of this study used the mix- method approach, both quantitative and qualitative, and the data from both forms of research were analyzed. The quantitative component in this study was in the form of rubric- based assessment from argumentative writing product. Therefore, first, a pre test was conducted for checking participants' competence to write using conventional method with outlining as the base of developing concept. Then, participants were treated using the strategy on questioning exploration . For

the experimental session, students were directed by using the questioning exploration through the guiding from Bloom's Taxonomy where the students were instructed to develop the questions from the lower order questions into the higher order one. Afterwards, the post test was administered in both groups to figure out the advancement of the students' learning.

The aim of the qualitative design was to see insight of the students' perception toward the use of questioning exploration. The data collected were from the classroom observation and the semi-structured interview to measure the students' perceptions, understanding, and other purposes like students' "inner world" which cannot precisely recognized and evaluated.

### **3.1 Instruments**

#### **3.1.1 Pre-Test**

The pre-test was adopted to determine students' proficiency to write an essay. In the pre-test, the students were provided a topic where they had to produce an essay based on the topic. In this session the students used traditional method such as outlining and mind mapping for developing ideas of their essay.

#### **3.1.2 Treatment**

The experiment of using questioning technique, in the first treatment, was introduced different types of questions from Bloom's taxonomy guide to write questions and was explained on how to use it in gaining information for their writing argumentative essay. It was greatly important to give the information and explanation in order that students could receive clear interpretation about how to work with questioning exploration. For the other treatment, a topic was delivered to participants along with the Bloom's taxonomy guide questions where they had to construct their own questions that associated with the topic given. After compiling the questions that covered from the lower order to higher order thinking skills questions, the students were given a chance to find the answer by various ways such as asking the questions to some different friends, lectures, and other sources. Through this way, the students were treated to be critic on investigating the evidence for and against different ideas, theories, and so on, consider alternative perspectives and explanations, come to an informed judgment from the proper evidence, and finally capable on giving logic arguments for the attained decision.

For the conventional method, a directed writing was given to students where they had to write an argumentative essay based on the developed outline. However, they had to write and develop everything from their own ideas.

#### **3.1.3 Post-Test**

After finishing the lesson, a post-test was administered to measure the students' progress in writing process. In order to acknowledge the validity and the reliability of the pre-test and post-test as well as the treatment sessions, the materials such as selecting a topic and questions explorations were selected as the instruments for this research.

### **3.2 Participants**

<sup>3</sup> The second grade students of English Department from Nusantara PGRI Kediri University were the target population of the study who took argumentative writing class. By

choosing the upper grade achievement of writing class, this means that the students had already encountered the basic skills of writing on developing paragraph writing and essay writing as well. The total number of 38 students who participated in the experiment class consisted of 28 female and 10 male.

## **4.0 DATA ANALYSIS AND FINDINGS**

The main question in this study was whether the use of questioning technique would generate students' critical thinking to improving students' writing skill. The result of the post test suggested clearly that the respondent in the experimental session who were to bare to writing by using questioning technique demonstrated a remarkable improvement in post- test compared to those who were used the conventional method as the gaining ideas in writing. Therefore, the result investigation have also explained the research questions that questioning exploration technique can be used to help the students to promote their critical thinking skills in writing compared to conventional method. The difference of the pre- test and post- test were listed in the following table:

**Table 1: Differences Pre-Test and Post-Test Achievement**

No.	Group	Pre- test	Strategy	Action taken	Post- test	Differences
1	Control	65%	Guided writing Instruction	Topic with outlining	65%	-
2	Experimental	65%	Questioning technique Instruction	Topic With questioning and organizing ideas	90%	18%

In the application, the students were able to work with the technique taught in the process of experiment by developing the questions given from the prompt of Bloom's taxonomy as the guided questions that they could built from the lower order thinking skills through the highest order thinking one. They got the chance to choose and develop by their own as long as the questions developing would carry on the parts of the critical order thinking skills that shown in Bloom's taxonomy. After compiling the questions that they have considered about, they would get the answers by asking friends, reading from various sources, and might also posing to the rightful person. In this process, the students shared their knowledge and tried to identify and decide the proper answer to respon their questions from the level of knowledge, comprehension, application, analysis, synthesis, and evaluation. It was found that the students were actively engage in the process and they kept in being good participation in the writing process as well . In addition, they were actively involved in the meaningful communicative language and classroom activity.

Lastly, the result of the interviewed session revealed a positive responses from the students that they become more active in the writing class and more on getting the ease way on gaining information to developing and organizing the ideas on writing. Moreover, the students felt comfort in the process of writing as they could easily complete the details of the topics given.

## 5.0 CONCLUSION

The most common reason why writing regards as the most difficult skill in learning language is lacking of ideas. Based on the observation, the students become passive participants in the learning process and writing became the low skill students accomplished. Due to these

reasons, questioning technique was utilized to boost the students to think critically and actively participate in writing activity administered in the classroom. Questioning plays a very essential role in teaching and learning which may build students' critical thinking skills.

By utilising questioning technique in teaching writing skill, students' critical thinking skills have been developed. It is proven by the significant development in post- test by the experimental , which illustrated a weighty increase from 65% to 90%. It showed that by questioning technique to the experimental group, the students were more confident and their critical thinking was stimulated by analysing and deciding the answers they got from the developed questions. The students were also engage with participating in the process poses and actively involved in a meaningful communicative language while the activity was administered in the classroom.

As a conclusion, the use of questioning technique in teaching writing had a good backwash on students' writing, as it could change the students' perception towards writing from passive participant to active participant during the learning process. Moreover, questioning technique assised them to raise their critical thinking through some phases as they learn how to organize and develop their existing ideas in writing through the surroundings supports. It was also proven that using questioning technique to teach writing is more productive compared to conventional method one.

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