An Exploration of Students' Difficulties in Using Critical Thinking Skills in Reading

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Abstract: This study intends to explore students' difficulties in using critical thinking skills in reading. The subject of this study was second year undergraduate students of Ar-Raniry State Islamic University, Banda Aceh. This qualitative study analysed students' difficulties in using critical thinking skills in term of interpretation, analysis, evaluation, inference, explanation, and self-regulation. A personal interview was conducted to find the data from the students. The result indicates that students' lack of practicing let them difficult in using critical thinking skills in reading. The other difficulties found were lack of language mastery, implied meaning, background knowledge, repetition and lack of vocabulary. Among six problems discovered above, lack of practicing, background knowledge and language mastery had made the students felt that critical thinking was difficult to be applied.

Keywords: Critical thinking; reading; difficulties

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INTRODUCTION

Reading is one of the four English skills that should be mastered by language learners. Through reading, students as are able to draw the meaning of words and get the information from a text (Hirsch, 2003). This skill is necessary for students since it can enrich and update their knowledge especially in English.

The main goal of reading is comprehension (Snow, 2002; Van Den Broek & Kremer, 2000). Comprehension in reading is needed to understand the information in the text. According to Chou (2011), comprehension involves understanding the vocabulary, seeing relationships among words and concepts, organizing ideas, recognizing the author's purpose, evaluating the context, and making judgments. Moreover, comprehension in reading is focused on three levels: word, sentence and text (Kustati, 2017). Successful readers are able to use strategies to engage and closely think of a text for building comprehension at these three levels.

Johnson, Archibald, & Tenenbaum (2010) defines comprehension as thinking on the highest level which requires inference, verifying, correcting and confirming of expectations about the text. These are related to cognitive skill. To achieve comprehension, students will not only read the text in the reading class, but also use their cognitive capacity. Students have to activate their thinking more to understand the text. In other words, comprehension is a complex process that readers do in order to understand and get the information from the text.

As the above explanation, it can be said that reading needs critical thinking to achieve the goal. Critical thinking is an ability to process the information by using some cognitive skills (Afrizon, Ratnawulan, & Fauzi, 2012; Diminarni, Ketua, Suhartini, & Suryaningrum, 2010; Saputra, 2012; Soviawati, 2011; Sudiarta & Putu, 2005; Sumarmo, Hidayat, Zukarnaen, Hamidah, & Sariningsih, 2012). The readers try to understand their reading by involving cognitive skills such as interpretation, analysis and evaluation. (Elder & Paul, 2001; Facione, 2007; Paul & Elder, 2006) explain that the cognitive skills used in the critical thinking involve interpretation, analysis, evaluation, inference, explanation and self-regulation.

Robinson & Ellis (2008) use a model of critical thinking adapted from Bloom's taxonomy of cognitive skills including logic, analysis, evaluation, inference, interpretation, explanation, and synthesis which are not much different from Facione (2007); Paul & Elder (2006) model. Robinson & Ellis (2008) also include some more specific skills to be used in their cognitive skills model. For example, analysis can be decomposed into deconstructing, contrasting, and comparing. In short, the skills used in critical thinking are mostly taken from cognitive domain.

Incorporating critical thinking in reading is very important. It assists students to achieve the goal of reading, which is comprehension. This kind of thinking engages students to actively participate in a reading class. As stated by Zabihi & Pordel (2011), several scholars believe that instructing children how to think and read critically is an important aspect of all reading programs which aim at comprehension. Kamali & Fahim (2011) also concludes that critical thinking is crucial for answering reading comprehension questions, especially those related to main ideas. Overall, reading by critically think is viewing the issue or information by activating readers' mind or thinking for the purpose of comprehension.

Several studies have been conducted related to critical thinking and reading comprehension. A case study which was conducted by Putri (2014) investigated Junior High School students' critical thinking in reading. Her study concerned about the investigation on students' critical thinking in terms of critical thinking (CT) components, CT standards, CT skills and abilities, and CT dispositions applied in reading. It was found that the overall students' critical thinking was good. However, in CT standards, the students were not able to answer the questions related to clarity, accuracy, precision, logic, and relevance. In addition to students' CT skills and abilities in reading, the students faced difficulties in analyzing the author's position and reading between the lines. The study suggests that teacher should provide activities that promote critical thinking in reading.

Another investigation on critical thinking ability in EFL reading class was conducted by (Zhou, Jiang, & Yao, 2015). Specifically, the study compares critical thinking ability in English reading between genders, majors and grades. The result shows that the critical thinking ability of university non-English students in reading is weak. The differences also lie in gender and grade. Teachers are advised to improve students' thinking method and put more emphasis on

arousing students' awareness of critical thinking.

The study conducted by Choy & Cheah (2009) investigated teacher's perceptions of critical thinking among students. They found that students do practice critical thinking in their classroom some of the time. They added that the teacher knew that their students were practicing critical thinking when they were able to defend their arguments. They felt that it was important for the teachers to guide students and help their learning.

The relationship between critical thinking ability, resilience and reading comprehension of texts containing unfamiliar vocabulary items was a research topic examined (Kamali & Fahim, 2011). They found that learners with higher critical thinking ability and resilience had better performance on reading texts with unknown words. It is proved by their investigation on Iranian EFL learners which then found that teaching critical thinking skills could enhance readers' reading comprehension ability.

Reading as language skill should be mastered by every language learners. Ar-Raniry State Islamic University has an English Department called *PBI (Pendidikan Bahasa Inggris).* Students should be able to think critically in reading III course as stated in the syllabus that students are expected to master some reading theories and be able to comprehend the text critically and creatively. Unfortunately, the researcher found that some students still face difficulties in comprehension because they were difficult to apply their critical thinking in reading process. Hence, this study is interested to analyse students' difficulties in using critical thinking skills in reading. The critical thinking investigated in this study are classified under the aspect of interpretation, analysis, evaluation, inference, explanation and self-regulation (Abrami et al., 2008; Dwyer, Hogan, & Stewart, 2014; Facione, 2007; Hashemi & Ghanizadeh, 2012;

Magno, 2010; Moseley, 2005; Rimiene, 2002; Yang & Chou, 2008)

Reading

Reading is the process of constructing meaning from written text. While reading, readers put several cognitive competencies to understand the text as a way to get the information. Sadoksi (2004) mentions that the purpose of reading is to get the information, to know the content of the reading text, and to understand the meaning of the words in the text. Since information is not always directly stated in the text, readers should not only pay attention on the printed letters or words, but they should comprehend it well in order to find what the author is going to inform. Therefore, comprehension cannot be apart from reading.

Reading comprehension is defined as an active skill. Duke & Pearson (2008) adds that it involves guessing, predicting and asking the questions. Readers are able to predict the writer's purpose as well as the content of the text. Reading comprehension is a process that actively builds meaning among the components of the text and personal experience. Readers actively participate to find the information by interacting line by line and at the same time bring their own background knowledge. From the above explanation, the researcher concludes that reading is a mental activity that needs the activation of readers' thinking to critically engage with a text and achieve comprehension. From this process, readers are able to understand and get the information intended by the writer.

Comprehension is the ability to go beyond the words, to understand the ideas in a text and the relationships that exist between those ideas (Gersten, Fuchs, Williams, & Baker, 2001; Grabe & Stoller, 2013). Reader as an active information processor, and the activity of reading and the text are the important parts that work together to achieve comprehension (McIntyre, Hulan, & Layne, 2011). As a conclusion, it can be said that

reading is successfully done when comprehension is achieved.

An Overview of Critical Thinking

Critical thinking was firstly highlighted by Benjamin Bloom's taxonomy many years ago (Duron, Limbach, & Waugh, 2006; Lauer, 2005). Critical thinking is defined as a way of thinking by using cognitive skills which involves higher level of cognitive ability to do deep analysis, synthesis and reflection. Critical thinking is also an ability to process the information by using some cognitive skills (Pithers & Soden, 2000; Weiler, 2005). Elder & Paul (2001) mentione that cognitive skills used for critical thinking are consisted of interpretation, analysis, evaluation, inference and explanation. While, Robinson & Ellis (2008) use a model of critical thinking which also taken from Bloom's taxonomy of cognitive skills including logic, analysis, evaluation, inference, interpretation, explanation, and synthesis which are not much different. From the above definitions, it is clear that critical thinking mostly includes cognitive skills which are used while thinking.

However, skill which is taken from metacognitive domain is also used in critical thinking process. It refers to Paul & Elder (2006) model which explain that the skills used in critical thinking are interpretation, analysis, evaluation, inference, explanation and self-regulation. Self-regulation belongs to metacognitive strategies. In short, critical thinking consists of cognitive and metacognitive strategis which are important to be used in prossesing the information.

Components in Critical Thinking

There are six components of critical thinking which are proposed. Proposed critical thinking consisted of logic, analysis, evaluation, inference, interpretation, explanation, and synthesis. Below are the explanations of each skill:

The first component is interpretation. interpretation as one of critical thinking components. Interpretation is the ability to comprehend information. In addition, Facione (2015) mentions that interpretation is considered as comprehending and expressing meaning of variety of experiences, situations, data, events, judgments, conventions, beliefs, rules, procedures or criteria. Interpretation includes the sub-skills of categorization, decoding significance, recognition, clarifying meaning, etc. In reading, this skill includes such as identifying the author's purpose, theme or point of view, recognize the text type, summarize the main idea, etc (Cottrell, 2011; Ku, 2009; McPeck, 2016; Suter, 2011).

The second components is analysis. Analysis is the ability to identify the main arguments purposed by the writer. Ricketts & Rudd (2004) defines analysis as "to identify the intended and actual inferential relationships among statements, questions, concept, descriptions, or other form of representation intended to express belief, judgments, experiences, reasons, information, or opinions". It includes examining ideas, detecting and analyzing arguments, comparing, contrasting, differentiating, and many others as the sub-skills of analysis. In the reading, the skills include such as distinguishing facts from opinions, finding arguments to support view, refining different views, etc.

The next component in critical thinking is evaluation. Evaluation is the ability to judge the credibility of argument based on the logic and evidence given. That evaluation is assessing the credibility of statements regarding to persons' perception, experience, judgment, belief or opinion. The sub-skills include in the evaluation are concluding, comparing, discriminating, etc. In reading activity, it includes judging the rationality of the text, comparing authors and one's own opinion, judging if the two statements are comparing each other, etc (Jiménez-Aleixandre & Puig, 2012; Staib, 2003).

The fourth critical thinking component stated is inference. The inference is the activity to decide or do rationally and to be responsible about the result of the conclusion. Inference is an ability to identify and to draw reasonable conclusion, to form conjectures and hypothesis and to consider relevant information. The sub-skills of inference are conjecturing alternatives, drawing conclusions, etc. While in reading, the examples of inference are constructing meaning from the elements in reading, predicting from the title or subtitles, understanding the implicit conclusions, etc (Halpern, 2002; McLean, 2005).

The next component in critical thinking is explanation. Explanation is the ability to inform the process of thinking or to inform the conclusion to others. Explanation skill will have a strong and coherent way to present the result of one's reasoning. He adds that this skill is one of critical thinking component. It includes such as describing methods and results, justifying procedures, presenting full and well-reasoning as the sub-skills of explanation. While in reading, it includes expressing one's own opinion, writing comments according to the text, etc.

Finally, self-regulation is the sixth critical thinking. Self-regulation is defined as an ability to control one's own thinking and correct the wrong thing had been made. It means that monitoring one's own comprehension involve the use of cognitive skills in critical thinking. The two sub-skills here are self-examination and self-correction. It includes correcting unreasonable inference, reconsidering the interpretation or judgment after reading, monitoring how well the text is comprehended, etc.

METHOD

This research was aimed to analyze students' difficulties in using critical thinking based on types of critical thinking skills they used. Based on this purpose, it was necessary to find the information and seek the views, beliefs, and perceptions from the participants. Therefore, this study used qualitative research to find the research objectives.

Bogdan & Biklen (1992) mention that qualitative research use the natural setting as the direct source of data. The researchers try to get the information from the things happened by going to the natural setting without applying any manipulation (Fraenkel & Wallen, 2003). It let the researchers and participants get the direct interaction at the time of the research (Creswell, Plano Clark, Gutmann, & Hanson, 2003; Ivankova, Creswell, & Stick, 2006; Tashakkori & Creswell, 2007). The cornerstone of qualitative methodology is the descriptions of people, places and events. In this study, the participants were English Department students of Ar-Raniry State Islamic University. According to Thomas & Harden (2008), qualitative research is aimed "to achieve an understanding of how people make sense out of their lives, deliniate the process of meaning-making and describe how people interpret what they experience. "The researcher is invited into the respondents' world to see or understand the world through the respondents (Glaser, 2017). Therefore, the researcher chose to use this approach since it is most likely to encourage participants to share their beliefs and experience about their critical thinking ability and problems faced by them in reading.

The research took place at UIN Ar-Raniry, Banda Aceh, Indonesia. This university has an English Department which is called *Pendidikan Bahasa Inggris* (PBI). This department provides four units for reading. They are Reading Comprehension I, Reading Comprehension II, Reading Comprehension III, and Academic Reading. The students who undertake reading class are expected to be able to read critically as the goal of reading program before they undertake Academic Reading. Therefore, their competence of critical thinking ability also has been practiced since they undertake Reading Comprehension I. However,

the researcher found that some students, started from Reading Comprehension I, still faced many difficulties regarding to critical thinking. This fact encourages the researcher to investigate their critical thinking difficulties in reading.

The subject of this research is the students who have passed Reading Comprehension III unit. There are 10 classes for Academic Reading subject which are consisted of 249 students. To obtain data from questionnaire, from 10 classes of Academic Reading, the researcher chose purposively students from five classes as the samples. The total number of the sample is 100. From these 100 students, the researcher chose five students to follow interview, after they filled in the questionnaires. To choose five students out of 100, the researcher considered those who used the least critical thinking skill in reading processes which is based on the questionnaires.

Research Instruments

In this study, the researcher used two instruments used to collect the required data; questionnaire and interview guide. Questionnaire is used for gathering in depth information about critical thinking in reading used by the students. In this study, the questionnaire consisted of 22 statements with Likert Scale to find out students' use of critical thinking skill. The questionnaire included lists of critical thinking skills including interpretation, analysis, evaluation, inference, explanation and self-regulation which are distributed into several numbers of statements which is modified and written in English (Dede, 2010; Glassner & Schwarz, 2007; Housen, 2002).

In order to find the information regarding to the students' problem when they are trying to use critical thinking skill in reading, the researcher needs to conduct an interview. The researcher used interview guide to get the data deeply. Interview was conducted by the researcher only after having results from the questionnaire sheets. From the six skills of critical thinking (interpretation, analysis, evaluation, inference, explanation and self-regulation) written in the questionnaire, students' strengths and weaknesses in using critical thinking in reading were indicated.

Because the use of critical thinking was also calculated, the researcher then chose five students who used the least critical thinking skills to be interviewed in order to find out their difficulties in developing critical skill in reading. Here, interview was conducted face to face between the respondent and researcher using Indonesian language. The questions were in line with the interview guide. To avoid losing important information during the interview, an audio recorder was provided to record what the respondents said.

Data Analysis

The result of questionnaire was used to find the students' score of critical thinking skill used in reading. The questionnaire was analyzed quantitatively. The questionnaire consisted of 22 statements with Likert-type scale. To do the quantitative analysis, the researcher rated the options chosen by students with the score as follow: never = 1, seldom = 2, sometimes = 3, often = 4, and always = 5. The researcher used the statistical formula proposed by Sudjana (1992). The statistical analysis was important for this study only to indicate five students who performed the least critical thinking skills in their reading process. These students were important for this study to be interviewed to gain data for the research question.

The audio recordings from the interview were analyzed following Huberman & Miles (2002) steps including data reduction to reduce unimportant data, data display to make the data visible, and data conclusion to conclude the analysis and present the result. This interview data was used to answer the research question.

RESULTS AND DISCUSSION

Five participants who had the lowest score of critical thinking skill from one hundred students of Ar-Raniry Islamic State University were interviewed. It was conducted to answer the research question about the difficulties faced by students when they were trying to use critical thinking skill in reading. The researcher used semi-structured interview to find out their difficulties. The questions were consisted of five items that asked regarding to critical thinking skill. However, there was only one item focused by the researcher and will be used to find students' critical thinking skills problems. The researcher referred statements contained in the questionnaire as the interview guide of the related item to investigate their problems when using critical thinking skill in reading.

After the researcher had done the interview, she analyze all the interview transcription by using data reduction, data display, and data verification from five participants to find out their problems in using critical thinking skill in reading. It was found that all the participants had ever heard critical thinking in reading but they did not clearly understand what is critical thinking and the content in it. The students also argued that critical thinking was important to be applied in reading. However, their problems when trying to use critical thinking in reading were diverse. The problems faced by them are explained clearly in the following paragraph.

Lack of Practicing

Three students from five participants were found by the researcher that they were rarely practiced critical thinking. Figure of speech or proverb sometimes was found inside the text. To understand what the text is going to inform about, reader should early know and understand what the proverb and figure of speech means is. Two of them shared their experience that they could not know or comprehend the text were reading if they did not habitually read figure of speech or proverb. As P1 shared that:

> P1: *"I am not familiar with the terms in the text. It can be misinterpret and can produce wrong meaning. Therefore, sometimes I need to frequently read the terms like figure of speech or proverb"*

Another participant also added that since figure of speech was not commonly appeared inside the text, students were not familiar to those terms and caused them difficult to interpret the text as one of critical thinking skill. In addition, one of participants admitted that he seldom practiced critical thinking skill except for the text he like to read.

Lack of Language Mastery

Another problem faced by students was lack of language mastery. Students understood the text and they would to express it or to share it among others. However, they said they would not be brave to do it because they did not master the language enough. It was claimed by P3 and P5. Here was P3's statement:

> P3: *"Sometimes I have already gotten information from the text but to sharing for other people is difficult since our limitation of language skills or information causes us not be brave to do it"*

The statement given above assumed that student was able to comprehend the text as interpretation skill. However, an ability to communicate it among others was not supported by his language ability itself. Student chose to keep it silent even though he understands the text. As a result, his explanation skill of critical thinking ability was not being trained.

Implied Meaning

Text in the reading always brings the information. However, information is hard to be

found without understanding the meaning purposed by the author. Student felt difficult when the author give implied meaning inside the text. Then, she would not able to analyze the text since she did not know what the author means. It was proved by P2 statement that:

P2: "For me, the difficult one is such as an implied meaning in reading. Because I should find and understand in depth the meaning implied inside the text"

Background Knowledge

As mentioned above that reader needs to find information purposed by the author, either it stated or implied. Then, he or she also should bring their own knowledge to successfully comprehend the text. The other problem which was found by researcher after interviewing was background knowledge problem. As we know that not every text given was familiar for the students. While, to think critically in reading, readers should has capacity to express his idea, to compare his opinion, or to judge the authencity of information. However, those were difficult to be done by the reader without supporting by their prior knowledge. As it mentioned by P1 below:

P1: "The other problem is when the information from the text I read has never known by me before and I do not have any opinion about it. So, I get difficult in background knowledge. Sometimes, when I get the new information inside the text, I do not immediately believe about it. Therefore, I should read from another sources"

Repetition

Students' ability to do critical thinking skills in reading also influenced by their limitation of repetition. Students only had one time to read, either it was in reading class or having a test. The limited time that was given to them cause them difficult to conclude the reading information as inference skill. One of

participants complained that he should read the text many times in order to give reasonable conclusion. This was evidenced through the statements given by him:

P3: "I think inference is difficult because I have to conclude by myself the meaning of the text. The hardest part is I have to find the implicit conclusion because I cannot directly conclude. So I need to read it many times, then I can make inferences from the text"

Furthermore, P4 also talked that reading for only one time makes him difficult to conclude the text.

Lack of Vocabulary

Vocabulary is one of elements in the reading. As it has been mentioned in chapter two that "adequate reading comprehension depends on a person already know between 90 and 95 percent of the words in a text". It can be said that comprehension needs a great number of vocabulary to be achieved. Beside the comprehension, critical thinking also needs several other abilities. One of them is distinguishing facts from the opinion as analysis skill. However, P5 revealed that he got difficult to differentiate fact and opinion since his vocabulary mastery was limited. In the statement below, he confirmed that:

P5:"I get difficult in the structure and the writing purpose. Since I have no enough vocabulary, sometimes the purpose can be misunderstod. The difficulty also lies in differentiating fact and opinion, since each of them has their own words"

Based on the above explanation, there were six problems discovered complicated students in using critical thinking skill in reading; lack of practicing, lack of language mastery, implied meaning, background knowledge, repetition and lack of vocabulary. Lack of practicing, background knowledge and

language mastery had become the serious problem among students in using critical thinking. Student shared that he honestly rarely practiced critical thinking except for the text he loved to read, for example football information. While, other students stated that they did understand well what the terms mean without reading it often.

As it has been mentioned in the previous chapter that the contents of critical thinking are included cognitive skill in it. In order to apply the skill, readers need strategy to help them in accomplishing the skills. Using background knowledge is one of the important strategies required by reader to connect between the text and their previous information Syatriana, Husain, & Jabu (2013) By having their own information regarding to the text, reader will try to do cognitive process such as reasoning, analysis, predicting, summarizing, synthesizing, and outlining toward the information inside the text. Therefore, having a good background knowledge also important to help students' successful in applying critical thinking in reading.

Students with lack of vocabulary and language mastery seemed that it would be difficult for them to discuss and express what have been understood by them regarding to the information in the text. Students were afraid of their language error made when they tried to talk. Lack of vocabulary also inhibited students to understand and comprehend the text. They would get trouble were trying to interpret the text without having enough vocabulary. Of course, it can be said that to be critically think about the reading passage, students should early improve their language competency itself.

The result found in their research stated that students with not having good language mastery and lack of confidence were difficult to demonstrate their critical thinking. They would rather keep their opinion as they were shy and unconfident. The students also did not respond well when asked to think critically. It was suggested that teachers need help in understanding the importance of incorporating critical thinking in reading.

CONCLUSIONS AND RECOMMENDATIONS

The interview result from five students who got the lowest score in critical thinking ability questionnaire indicated that students practiced rarely had made critical thinking difficult for them. The other problems found were lack of language mastery, implied meaning, background knowledge, repetition and lack of vocabulary. Among six problems discovered above, lack of practicing, background knowledge and language mastery had made the students felt that critical thinking was difficult to be done. From the result of the study, recommendations for educators, especially English reading teachers, students and other researchers are drawn in the following paragraph.

The role of the teacher in the classroom is very important. Teachers are expected to combine and give the material encouraged students to think critically while reading. They should start to train students' skill of critical thinking by giving the easier material at the beginning, then it was followed by giving the higher difficulty of material. Teachers also expected to have a better technique and strategy in teaching reading, for example by creating discussion class in order to push students to have more critical reading practices.

In addition, critical thinking is a learning process that need to be practiced constantly by the students. It is good for students to practice critical thinking for not only in reading class, but in every time they read English text. Enhancing knowledge is also important to be done by the students in order to support their background knowledge required while reading. Since critical thinking requires students to express and share their knowledge, it is also expected for students to improve their

language skill and vocabulary mastery to support their learning process.

Finally, this study investigated students' critical thinking only through questionnaire and interview. It is suggested for other researchers who intend to conduct the same issue to find students' critical thinking by also involving themselves in students' learning process.

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