

INQUIRY - CHART FOR TEACHING CRITICAL READING

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Abstract

This study aims to investigate how inquiry chart facilitates students in learning critical reading and to describe benefits and challenges found by students during teaching and learning process. Qualitative research data were collected through classroom observation, written test and depth interview. The results revealed that I-Chart learning strategy facilitated students to learn critical reading abilities. Deep interview confirmed that students responded positively toward the I-Chart learning strategies. They were motivated to learn and read more texts. They admitted that the learning strategies might have been the tool for them to enhance deep knowledge of a topic. However, the study found that students remained inactive in delivering arguments in the classroom. Students' background knowledge had been one of the teaching obstacles found in this study. Time constraints and unavailability of internet access might be the serious problem to encounter in the process of teaching and learning in the classroom. More participants are recommended for further research.

Keywords: Inquiry-Chart, Reading

INTRODUCTION

Reading is important for students in every level (Noor, 2011; McNamara, 2009). The reason is because reading enhances students' personal development of knowledge, information and civic life (Glen, 2011; Cullinan, 2000; Gaildee, 2015). However, the development of global economies, technologies, and exponential growth in information are changing rapidly in our society of 21st century (Braten, 2015). Accordingly, to anticipate the condition above teacher needs to prepare students to learn critical thinking ability that is applied in reading (critical reading) (Kurland, 2012; Duncan, 2001). The essential skill is needed because students can question, analyze, interpret and evaluate the availability of information they read (Kurland, 2012). Thus, the integration of critical thinking and reading could be most effective to learners.

Besides, the urgency of critical reading abilities are also needed by poor college readers (Inderjit, 2014, p. 1; Noor, 2011) especially in Indonesia (Mustafa, 2012). Students are usually overwhelmed by the density of their textbook and unfamiliarity with academic discourse (Hobson, 2004). To Hobson, they are even lack of motivation, involvement in learning, and experience or inadequate prior knowledge and limited subjective view of what is read. To eradicate the reading problems, students are needed to be exposed to other viewpoints of texts. such as discussing and putting the text that help them gain different perspective on issue of the text, sharing widespread involvement in language which increase students' poor motivation, and introducing them to communicative based activities, recorded readings, question practice, and group work (Gaildee, 2015).

Regarding the phenomena, inquiry based approach as the new 21st century learning approach is offered to implement in the EFL setting (Carnesi and Dgiorgio, 2009, p. 1). One learning strategy which adopts the principles of the inquiry-based learning (IBL) approach and advocates student's critical reading in EFL setting is known as inquiry charts (I-chart) (Tierney, Dishner and Readence,

1990; Sweeney, 2007). Sweeney further argues that this I-Charts is the way of how teacher may improve students' critical reading ability by integrating students' background knowledge of the topic and additional information found from many sources. This is also the strategy that allows students to examine the topic through the student's engagement of the sequence activities namely Planning, Interacting, and Integrating/Evaluating (Tierney, Dishner and Readence, 1990; Hoffman, 1992). The result of the use of inquiry chart is as the means for teacher to measure students' understanding of the topic. The realizations of the process help students understand how the social world we inhabit are constructed through literacy practice in everyday thinking skill (Beach and Myers, 2001, p. 20). In other words, students are more engaged with English when they connect it to their own lives.

A literature search was conducted to identify and obtain much information on the area of critical thinking and reading as possible as follows. Research conducted by Hoffman (1992), p. 121) was to suggest teachers to use I-charts strategy in reading classroom. This study proved that the learning strategy was useful to students with rich information. The appropriate instruction also reveals that the skills of critical thinking and reading can be acquired successfully by all students. Another research of I-charts was also done by Assaf (2011). This research strengthens Hoffman's statement to use I-Charts to provide teachers and students a structure to learn questioning strategies, note taking, memorizing, and synthesizing information intensively.

Although the I-Charts practice is seen as significant learning strategy, it has been comprehensively practiced yet in English education context. The research about Inquiry based learning approach that has been developed by many experts is mostly in the general science program (Witt and Ulmer, 2010, p. 269; Kühne, 1995; cohwell, 1999; GLEF, 2001). They conclude that the use of inquiry-based learning is helpful for academic science achievement especially in the program of nursing, medical and physics. Thus, the phenomena interest the researcher to fulfill the gap by conducting the study about the implementation of the I-Charts in teaching critical reading in university level. This study is also intended to find the difficulties and benefits faced by teachers and students during the process of teaching and learning.

METHOD

Inherent to previous research questions and research purposes, this study employed a qualitative research design for some major reasons. 1). The research questions of this study tends to be general and open ended answer to be analyzed ((Mackey and Gass, 2005, p. 164). 2) is that because the researcher implemented the teaching program and observed directly how the strategy of I-chart helped students in learning critical reading (Mackey and Gass, 2005, p. 10; Tomal, 2003, p. 3-4; Alwasilah, 2012, p. 49; Bogdan and Biklen, 1992, p. 2), and 3) the students' critical reading through the stages of inquiry chart which resulted on the product of mapping out the information gained from the text (Hoffman, 1992). Case study design has also been the research specification model which was relevant to this study because the study focused on one single case of the teaching inquiry-chart (Nunan and Bailey, 2009, p. 158; Yin, 2003, p. 1-3; Cohen, 2007, p. 85).

The research was conducted at English education major of a university in Bandung. The purpose of higher order of thinking that the critical thinking/reading tends to find more effectively gained in the university level (Emilia, 2005. p. 75). The critical thinking abilities which the study hoped was the students who will be more actively and critically respond to the text given in the learning process. The participants of this study were the semester two students' teacher of English Education major (Bachelor degree) in one University in Bandung. The tparticipants of this study were 30 students: 20 females and 10 males. According to this, the participants of this study were the students

who had high interest in learning. This would be hoped that they would be a representative who made significant result on the study (Alwasilah, 2012, p. 101-103; Bogdan and Biklen, 1992, p. 61).

The researcher used three techniques of collecting the data :Teaching Program (Observation), interview and students' written test. Observation was the main method used in this study. Participant observation was used to enable the researcher to understand clearly about what was happening during the process of teaching and learning (Frankel and Wallen, 1993). Students' writing journal was also used to comment on the teaching program and to know whether the selected teaching strategy could help them in learning (Emilia, 2005, p. 78; Wade and Moje, 2001). The theories are referred to the teaching phase of the inquiry chart for teaching critical reading (Hoffman, 1992), students' interest in learning activity, students action and behavior, verbal and nonverbal communication (Erikson and Kovalainen, 2007, p. 77).

In this study, interviews were used to question and clarify what the students wrote in the writing journals of the study. Second, the interview questions helped the researcher to answer the research questions through careful analyses (Erikson and Kovalainen, 2007, p. 79).. The aim was to obtain the information from both teacher and students about their interpretation of teaching discussion text through inquiry based learning approach (Stake, 2010, p. 95), to find the things that the researcher was unable to search herself (Ray, 2007; Blaxter, 2001; Stake, 2010, p. 95). Interview questions were developed from the theories of challenges and benefits faced by teachers and students during the teaching and learning process in the classroom (Beach and Myers, 201; Friessen, 2004; Alberta Learning; Smith, 2007; Friessen, 2009; Healey, 2004, 2005, p. 4; Healey and Jenkins, 2000 cited in Healey, 2005; Jenkins et al., 2003 in Healey, 2005, p.5; Barron, Darling and Hammond, 2010, p. 212; Gertzman & Kolodner, 1996). Therefore, to reach the purposes, the interviews were conducted in two stages, one was done after the regular teaching process and another was done after the whole process of treatment (Emilia, 2005, p. 81). In these two stages, the researcher involved 6 students which were categorized into lower, mid and higher achiever to describe their ability improvement in reading and difficulties found during the teaching and learning process.

Three kinds of tests (pre-test, post test and two written tests) were administered in this study. These written tests were to see the development of critical reading abilities on students. Pre-test was given at the beginning of the meeting to diagnose students' knowledge of the critical reading. Two written tests were given during the teaching and learning process in the classroom. They were to know the improvement of the knowledge and criticality in reading. At the end of the meeting, post test was also given to find whether the students' criticality in reading improved by the teaching of inquiry chart.

Data analyses were conducted to find the pattern, ideas and understanding about the results of the study (Merriam, 1992, p. 162). Thus, the steps of analyzing the data collection above are explained in the following steps: First, the data of the students' diagnostic test were assessed by the critical reading rubrics proposed by the experts. Second, data from interviews were transcribed clearly. The participants' name were replaced to the pseudonym (Emilia, 2005, p. 85). Emilia further states that the transcripts of the interviews were then confirmed to the participants to make sure whether the words on the transcription were what the participants meant. Third, data from the students' learning journals were employed to clarify what students said in the interview. After all the data were collected, they were reduced and referred to the research questions of this study. These steps were in line with Moleong (2007) who says that all data from students' journals, colleague's observation, researcher's observation notes, and recording of interview (Moleong, 2007; Jauhari, 2008) are collected to be analyzed and referred to the research question.

In the process of data categorization. In this phase, all transcriptions were divided into the discrete point related to the research questions about the steps done by teachers, that was, data categorization (Moleong, 2007; Sugiyono, 2013). The next step was the process of triangulating the data. This process involved many sources of data collection which were triangulated clearly in the research paper (Yin, 2003; Stake, 2010, Alwasilah, 2012; Nunan and Bailey, 2009). It was to help the researcher to conclude all the data easily (Stake, 2010). In the last step, the researcher concluded and presented the data into the research paper.

RESULTS AND DISCUSSION

Results

This part presents two things related to preliminary study and various steps of teaching program developed in this study. The descriptions of the program was based on the data from classroom observation, students' journals, researcher's field's notes and colleague's filed notes. Below is the summary of the teaching program

A. A. STEP I

1. 1. Introducing the teaching program
 - a. a. Distributing the pre-test to diagnose students' knowledge about critical thinking, critical reading and inquiry chart learning strategy.
 - b. b. Explicit teaching on concept of critical thinking and critical reading
 - c. c. Explicit teaching on explaining critical thinking disposition.
 - d. d. Explaining discussion text and its features

A. B. STEP II

1. 1. Teaching cycle I

Teaching focus :

- a. a. Guessing the main idea and detail information through skimming and scanning technique.
- b. b. Teaching critical thinking disposition.
- c. c. Articulating the writer position.
- d. d. Identify arguments of the text.
- e. e. Taking position and comparing with the real situation.

Text : teachers' certification program

1. 1. Stage 1 : Pre-reading activity ((planning phase)
 - a. a. Planning the materials by discussing the topic that will be discussed in the lesson.
 - b. b. Identifying the topic of the lesson.
 - c. c. Investigating the text by forming a questions together (teacher and students).
 - d. d. Grouping the students.
 - e. e. Constructing I-chart.
 - f. f. Explaining the scanning and skimming technique.
 - g. g. Guiding the students to search for many sources of reading.

Stage 2 : While reading activity (Interacting phase)

- a. a. Exploring students' prior knowledge of the topic.
- b. b. Sharing the interesting facts and questions about the topic.
- c. c. Reading the sources gained from various texts.
- d. d. Recording and monitoring the students' reading result.

Stage 3 : Post reading activity (evaluating phase)

- a. a. Summarizing the topic of the lesson.

- b. b. Guiding the students learning in comparing their prior knowledge of the topic with the information gained from many sources.
- c. c. Reporting the result of the discussion process to the whole class.
- d. d. Reflecting the teaching and learning process on the students writing journal.

A. C. STEP III

Teaching cycle 2

Text: The effect of watching many television programs

Stage I

Stage II

Stage III

STEP IV

Review

Post test

Discussion

There were two activities conducted in the preliminary study, including i) introducing the teaching program to the students and ii) discussion of the topics for the teaching materials.

Introducing Students with the Teaching Program

In the first meeting of the introduction of the teaching program, the researcher tried to inform the students that they would be involved in the teaching program for 11 classroom meetings (Beach and Myers, 2001, p. 28). They would be given some teaching materials related to the enhancement of criticality in reading comprehension. Relevant to the teaching critical reading, this study employed inquiry chart (I-Chart) and applied principles of inquiry learning approach (Tierney, Dishner and Readence, 1990; Sweeney, 2007; Allen, 2013). Besides, this study also followed the teaching procedures which are purposefully suggested by Wallace (1992, 2003) and Tierney, Dishner and Readence (1990). Below is the explanation of the implementation of the teaching program. The reasearcher also tried to tell the definition o critical thinking and critical reading. Through observation, teacher wanted to know the implementation of the inquiry chat, and also the benefits and challagnes of the program.

Furthermore, the students showed their internist in the learning of critical thinking by questioning the difference between critical thinking and critical reading. This indicated that they were involved in the process of teaching and learning. Meanwhile, teacher tried to respond the question by delivering the following explanation. This excerpt indicates that critical reading is inseparable from critical thinking. Critical reading is the ability of critical thinking which is applied in reading. Critical thinking abilities help the students to understand the text. Being critical in reading means readers do not take the texts for granted (Chaffee, 2000). The critical reader sees the text as a problematic thing and the texts have still many things to be questioned (Wallace, 2003). It was also said that the critical thinking dispositions are essential for students because they enable students to be more sensitive in reading texts (Ennis, 1994). In other words, critical readers do not seek for the mistakes and weaknesses of the text rather they search for an alternative to decide what to do and believe (Ennis, 1986; Kurland, 2000).

After that, the teacher went on explaining critical thinking standards to students. The teacher also showed the examples of how to have good arguments, The teacher emphasized that opinion is an expressions of preference or subjective and does not contain any supports (English reader, 2009). Theteacher in the classroom activities involved the students in the discussion with the topic issued in daily lives. It was intended to practice students' critical thinking ability

A self-selected material was used by the researcher to increase students' motivation in learning as they have a sense of control purpose and competence that will be explored (Perks, 2010).

- B. a. Teacher certification program,
- C. b. TV Program: bad and good effects,
- D. c. Death Penalty for corruptor,
- E. d. Smoking.

The successful teaching is the main purpose in which inquiry process is made (Warmer and Myers, 2008). The development of self directed learning is to develop students' responsibility for their own learning (Smith, 2007). They will be able to create knowledge rather than knowledge being imposed or transmitted by direct instruction (Bruner, 1999).

The Teaching Program

The activity of the teaching program will be divided into two phases. They were explicit teaching of the critical thinking in reading and discussion of the teaching critical thinking in reading through inquiry chart strategy. Each phase will be delineated in the following discussion.

Teaching Critical Reading through Inquiry- Chart Strategy

Critical reading abilities that were reflected in the teaching phase were the ability of questioning, evaluating, analyzing, and synthesizing. These abilities are in line with the definition of critical thinking proposed by Chaffee (2000), Paul and Elder (1990), Paul (1992), Stenberg (1986), Facione (1990, 2000), Lai (2011), Ennis (1985), Bailin et al (1999), Willingham (2007), and Dam and Volman (2004). These abilities As mentioned in chapter II,

The teaching of critical reading which the study used was adopted from the teaching reading strategies namely inquiry chart (I-Chart) (Tierney, Dishner and Readence, 1990). This study also utilized the teaching of critical thinking which was infused to reading, so that students are pleased to deliver their opportunity to apply their critical thinking in reading (Kurland 2000, Sulistyaningsih, 2008). From these concepts, the teacher in the classroom, followed the stages from teaching critical reading proposed by Wallace (1992) (pre, while, and post reading) and were infused with the inquiry chart (planning, interacting and evaluating). This was because the strategies were commonly used in higher education level to prepare university students to have preparation guide and to have research skill later (Tierney, Dishner and Readence, 1990; Sweeney, 2007).

Pre Reading Activity.

Topic identification stage was begun when teacher started the lesson by playing a video related to topic of 'Teacher Certification Program'. the researcher as stated in definition in chapter II intended to look for students' abilities to question, analyze, contextualize, interpret and evaluate information in the texts. This was because those abilities were important for students in developing their reading abilities. Agreeing the topic has been one of the requirements for the implementation of the inquiry chart (Allen, 2013) because it may increase students' motivation in learning and give a sense of control purpose and competence that will be explored in the teaching and learning process (Perks, 2010).

Furthermore, the video explained about people complaining on teachers' certification program. Once, the teacher asked the students about what they thought. The question was "What do you think when you saw the video just now? Can you say something about it?" This activity was intended to activate the students' background knowledge about the text and to motivate them to engage in the inquiry learning process (Beach and Myers, 2001). From this activity, they were actually motivated to present their arguments about the video. This was showed in the following excerpt.

“I agree with the video. Certification program is not guarantee for the teacher skill set. The certification program does not give any significant improvements on teacher teaching capability. The teacher only gets a higher salary without taking effort in improving their capability in teaching” (Ica, Ucu)

This statement is corresponding with the theory which says that students are able to argue and think critically to the evidence drawn in the text (Ennis, 1994). Students took many perspectives About the issue given. This situation also showed that the video as the authentic material interests the students to get involved in teaching and learning process of inquiry (Heitler, 2005).

Then, the teacher went on the next stage, the *question formation stage*. This question formation phase was used to please students to make questions and hypothesis (Wallace, 1992). Then, the teacher distributed the picture related to the same topic discussed. She also asked the students about the critical reading questions. They were:

2. a. What does the writer tells us about?
3. b. Why is the text written?
4. c. To whom the text is written?
5. d. Who would feel left out from this text?

Then, the students responded on the critical reading questions. They said that the writer of the text was a teacher who wanted to improve the salary. The demonstration in the picture looked chaotic. The people brought the texts which scolded the policy maker. The government or the policy maker would have felt discriminated by the picture. The excerpt showed:

“I think the writer wants to tell the reader about strength and challenges of certification program.” (Tami, Pedra)

This except shows that students were been able to identify and classify the strength and weaknesses of the issue. They could differentiate the pros and cons of the issue. From this kind of statement, it was showed that achieved the disposition of being able to identify the writer’s intended meaning/purpose in the text. A critical thinker is someone who can successfully identify the argument and communicate author’s intended meaning of what is said and what is written (Ennis, 1985). The student had also showed his evaluation ability because the statement had administered to answer of critical reading question made by teacher (Deal and Rareshide, 2013). This ability was learned for more than three meetings in the classroom of inquiry learning (Hoffman, 1992).

The final phase of the planning was that *materials collection*. The teacher in this phase asked the students to collect the materials from many sources. The sources were collected from the class textbook as well as other texts, trade books, internet, and encyclopedias (Tierney, Dishner and Readence, 1990; Allen, 2013). This problem becomes the challenge of the implementation of inquiry chart for teaching critical reading. The time for learning is limited; my group could not assign every question completely. This journal shows that time constraints might be a serious problem to solve. Complex classroom activities in the process of inquiry chart learning should be considered by inquiry teacher. Teacher of inquiry provides an extra time for students to find relevant sources and knowledge to entirely fill the questions in chart (Tierney and Readence, 1995).

While Reading Activity

In while reading activity, students will learn the critical reading abilities especially the ability of understanding and analyzing. While reading activity was conducted started when the teacher and students collaboratively worked to fill I - Chart column. Hoffman (1992) states that post reading activity is supported by students' prior knowledge and source materials. The excerpt showed that the students' background knowledge were representatively enough to manifest the idea or give

opinion in responding the text (Emilia, 2005). In the phase of *sharing of interesting facts and new question*, students filled in the last two columns of the "What We Know". Interesting facts column was the place for teacher to record the students interesting facts (background knowledge). Unrelated questions volunteered by students should be recorded by the teacher in that column. - Different from the listed question

- a. When is certification program formed?
- b. Are the requirements of the certification program fair for teacher?
- c. What should the government do to solve the problem faced in certification?

Their questions indicated their eagerness to the topic (Tierney, Dishner, and Readence, 1995). Then, the teacher went on the phase of *reading and recording*. Students read various sources collected previously and the recording of students' responses from these sources to the question listed. Time allocation was also allocated by the teacher to facilitate their reading time. However, the reading time may be one of the challenges faced by students and teachers during the implementation of the program. There were some reading sources gained and the students read and identify and also analyze the sentences. After reading and discussing the topic, the teacher recorded any information from each that will answer the question posed on the I-Chart. The recording should be accurately quoted (Allen, 2013) in the flowing excerpt. The following excerpts were about the students' results of the reading from many sources about the certification program. The students took much information from the internet, magazine, newspaper and TV news,

Meanwhile, for the challenge of the certification program, the students found that

“Teachers feel that the requirements for the certification program are hard to achieve. It is because the teachers cannot find or reach their minimum teaching requirement, the salary are still far from their expectation, so thee they have to find another hour in other school“ (Mahmudin, Putri, azizah)

This excerpt shows us that the students had found much information about the certification program; they at least could know the requirements of how to be a good teacher. They could absorb the information of how to implement their knowledge when they will become the real teacher in the future.

In response to the relation between students' understanding about the topic and their background knowledge, students in the classroom research attempted to correlate the issue with thir existing prior knowledge. The excerpt is:

“My mother is the teacher in the village; she always says that she and her friends could not attend any seminars or trainings held by institutions in the city. They are in trouble in getting access to the certificates for their requirements” (Khaliq).

This excerpt shows students' ability to present reasons from many perspectives. This was in accordance with the theory of disposition in the critical thinking. The theory says that the critical thinker usually has the ability to present reasons, arguments and take his own position in the text. After reading the text, the students also delivered their own feeling after reading the text. Their feelings were taken from various perspectives (Reiisanbach, 2001).

Post Reading Activity

Critical reading ability which was reflected in the post reading activity was synthesizing ability. In the post reading activity, the teacher invited the students to generate conclusion of the discussion through the process of summarizing, comparing, and reporting. First, the students were asked to have the completion of I-Chart then they shared the results to the whole class. The summary phase required the students to make summary for each of the guiding question as well as the interesting facts column. We can see the summary of each question in the following excerpt.

Teacher certification program is government policy that comes from government attention for the teacher prosperity in Indonesia. This program benefits teachers in many aspects. Many teachers can increase their teaching experience, salary, knowledge, and so on. However, challenges of this program are found when teachers cheat to get false certificates. Government should monitor the implementation of certification program regularly and select the most credible teachers to be certified (Julia, Mahmudin, Putri, Ucup, Ica, Pedra)

This excerpt shows that the students might be successful in identifying the topic and generated the conclusion. Data analyses on teaching program and field notes focused on what was intended by the researcher in chapter III. The teaching program attempted to look for students' criticality in reading. This classroom observation was required to see whether the students have achieved the learning objectives of the reading comprehension II.

To follow the work of Hoffman (1992) and Wallace (1992), the teacher employed the three teaching procedures of the teaching critical reading. They were pre, while and post reading. The intentions of the pre reading activity was to make the planning about the lesson that would be implemented in the classroom. This was also conducted to train the students' question formation skill as well as reflected their students' critical thinking disposition and abilities. While reading activity was conducted to analyze and discuss the questions posed in pre reading activity. The teacher also gave the students skills of reading which were usually utilized in reading activity, such as finding main idea, detail information, reference, difficult vocabulary, etc. The teacher in teaching program helped students to probe their prior knowledge and connect them to the given issue.

Meanwhile, post reading was used to confirm and summarize the teaching materials issued during the while reading activity. In this phase, students were invited to share their result of the inquiry chart to the whole classroom. Other members of the classroom gave and shared their arguments about the topic. The interaction was actually needed to practice their criticality and applying their dispositions and abilities in a real situation. The conclusion of the study was discussed together to fulfill the requirements of the teaching goals. This was the prerequisite activity to know the benefits and challenges of the program.

The results of the teaching procedure were that the students had achieved the learning goals of reading comprehension II which were progressively connected to the level of thought in the cognitive learning process (Bloom taxonomy). Besides, the students had successfully developed their critical dispositions in learning and enhanced their knowledge of the topic deeply by comparing and contrasting the ideas in many source of readings.

Regarding the teacher's role in the classroom, the researcher acted as the facilitator who facilitated the learning process and gave the feedback for students to correct their language abilities and motivated them to actively participate in the teaching and learning process. As the result, students were actively engaged in the classroom activities and enthusiastically discussed and read the issue chosen at the beginning of the lesson. Their high motivation in learning was also shown when they played a drama, poem, and sang a song in the classroom. They were totally involved in the learning activity.

The teaching and learning process of inquiry chart had motivated the learners to read many source of readings. Students in the learning process were also motivated to deliver their arguments about the topic by seeing and listening to the other friends' speaking. However, some students remained inactive in the classroom. The reason of the students in this situation would be explanatively depicted in the data and discussion of the students' learning journal and the interview which supported the findings of the teaching program.

Students’ product of inquiry chart was expected to help them in mapping out the ideas and reflected their abilities in making the critical questions and practiced them to think in a better condition and followed the level of the prerequisite thinking. It was mentioned in the methodology that the students’ written test was administered to predict about students’ critical reading abilities. The students’ written tests were given three times; pretest, two written tests, and posttest.

From the data on the students’ written test, we saw that there were only few students who were scored up though the 60. It means that there was only a little difference made by the teaching instruction. However, this was not intended to use as the main data source. This was used to support the successful of teaching program made by the teacher. The students’ written test could not be generalized as the effective teaching strategy because this study did not involve the control group/class which balanced the result of the teaching program.

Data from Students’ Written Test

Having general interpretation of students’ test results, the researcher used paired T-test to check improvement among the test scores. The following table showed the computation of the scores.

Table 1

Paired Sample Test		Paired Difference t	Df	Sig. (tailed)	95% Confidence Interval of the Difference	
		Mean	Std. Deviation	Mean	Lower	Upper
Pair 1	Pretest - I	-8.500	7.687	1.403	-11.370	-5.630
					-6.057	29
						.000

The figures in Paired Sample test (Table 1) showed that there was difference between pre-test score and test I (T1) for the sig 0, 00 < 0, 05. It means that students’ critical reading abilities were still low. The improvement could be understood because students had only been learning about critical reading for only three meetings.

Table 2

Paired Sample Test		Paired Difference T	df	Sig. (tailed)	95% Confidence Interval of the Difference	
		Mean	Std. Deviation	Mean	Lower	Upper
Pair 1	T1 - T2	-8.567	4.224	.771	-10.144	-6.989
					-11.109	29
						.000

Then in the following three meetings, students took another reading test (T2) with same critical reading questions but in different text. Table 2 showed that there was difference between test 1 (T1) and test 2 (T2) for the sig 0, 00 < 0, 05. Students’ critical reading abilities improved.

Table 3

Paired Sample Test		Paired Difference T	Df	Sig. (tailed)	95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Mean	Lower	Upper			
Pair 1	T2 - Post	-4.467	4.911	.897	-6.301	-2.633	-4.981	29	.000

Table 3 showed that there was difference between test 2 (T2) and post test for sig 0, 00 < 0, 05. It means that students' critical reading abilities improved. Students' improvement in reading was seen after all teaching processes were conducted.

Table 4

Paired Sample Test of t test to p test		Paired Difference t	Df	Sig. (tailed)	95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Mean	Lower	Upper			
Pair 1	PreTest PosTest	-21.533	7.655	1.398	-24.392	-18.675	-15.407	29	.000

Table 4 showed that there was difference between pre-test and post test. It means that students' critical reading abilities improved. The result showed that critical thinking and critical reading abilities were important for students' evaluation ability. Critical thinking and reading abilities should be practiced and learned simultaneously (Ennis, 1985; Hoffman, 1992; Chaffee, 2000). However, the overall results of the statistical value could not be claimed as the effect of the teaching program because the study only involved one single group to be analyzed. In other words, we need other control group to compare the results of the students' skills (Hatch, and Farhady, 1982). The results of students' written test were only used to show the description of how the inquiry chart strategy could enhance students' critical reading.

CONCLUSION

In line with the purpose, this study was intended to investigate how the inquiry chart facilitated the students in learning critical reading and described challenges and benefits of the implementation of I-Chart in the classroom. Previous chapters had been administered to answer the research questions raised in this study. For the first research question, data from classroom observation and interview indicated that I-Chart learning strategy facilitated students to learn critical reading abilities through the phase of planning, interacting, and integrating/evaluating. The ability of questioning was

performed when students were taught how to make relevant question in the planning phase. The ability of evaluating information in the text was treated in interacting phase to enable students to critically relate their prior knowledge of the topic to the existing information in the text. Meanwhile, the ability of synthesizing was reflected in the integrating phase. Teacher taught the ability of generating conclusion which was interactively combined with the other information gained from many sources. Data from students' written test gave evidence that students' critical reading abilities improved during the teaching and learning processing in the classroom. The results were seen on the table of students' scores development in appendix. Students improvement were seen when they have been taught critical reading concepts and dispositions in several meeting. They answered critical reading questions successfully and were able to deliver arguments and reasonable judgments freely.

Then, data from students' written test and interview confirmed that students were also able to identify the type of the text, topic, writer's intended meaning or writer purpose of the text and writer position. Data from interview supported that students realized that critical reading abilities needed much time and practice. Data from classroom observation and interview confirmed that discussion process revealed the disposition of being open minded and considering many perspectives of others. The students shared their opinions and gave solution to the problems raised in the classroom. These skills were actually in line with the cognitive process for measuring students' critical thinking.

For the second research question, there were some conclusions drawn in this study. They were gained from classroom observation and interview technique. Data from classroom observation and interview showed that students responded that they were motivated to learn and read more texts. They admitted that the learning strategy might have been the tool for them to enhance deep knowledge of the topic. However, the study found that students remained inactive in delivering arguments in the classroom. They said that they were reluctant and afraid of being laughed by other students. Students' background knowledge had been one of the teaching obstacles found in this study because they could not perform the complete arguments of the topic. Time constraints and unavailability of internet access might be the serious problem to encounter as they could challenge the process of teaching and learning in the classroom.

Some limitations were found in this study. First, this study was conducted as the single case study, so that the researcher only involved one classroom discussion to teaching critical reading through inquiry chart strategy. Thus, the results of the study could not be generalized as the successful teaching method for teaching critical reading. Second, the participants of this study were volunteer students; therefore, they could not attend all the meetings of the learning process. They did assignments of main subjects. Third, the researcher had only a little time to implement the teaching method, so the study only looked for several critical reading abilities. The limitations made the researcher confused to manage the time allocation for each stage of inquiry chart. The last limitation was about the classroom discussion management. It was not easy to monitor the large group discussion. There were only few students who wanted to listen to the other friends' arguments in the discussion. Some students were anxious to speak up and deliver the arguments to the classroom. They kept silent and agreed with head of the group. Finally, the teaching strategy needed a high technology use to search for many sources of reading. However, the unavailability of the internet and laptop for every student might be the serious problem to encounter.

In line with occlusions and limitations of the study, the researcher recommends several points to be taken into accounts. The first one is because the time constraints had been one of the teaching problems found in this study, further studies are recommended to set more time allocation to implement the teaching process. The institution should also reform and decrease the materials of

the curriculum. As the result, the teaching exposures would make the students become more knowledgeable and critical in reading. As the limitation, this study only used one group/class to implement the inquiry chart strategy, so the next researcher can do the same study with two or more groups involved in the research to get more elaborative results and generalizations. The control group will be expected to give different impacts on the students' critical reading abilities.

Furthermore, this study attempted to infuse the teaching of inquiry chart into the teaching of critical reading, therefore, it is recommended for further researcher to conduct the study in the area of speaking or writing because the inquiry based learning is practical for any language skills. As the study did not concern primarily on the students learning improvement, so it is recommended for the next researchers to focus on the internal and external factors of the critical reading improvement. It is because the critical thinking abilities are needed for every student to evaluate the information. Volunteer participants were also the limitation of study, so it is suggested to choose the best group/class to gain representative results of study. The important thing that the teacher can share with the students in the institutions is a love of reading. That is why the very first thing that the teacher can do with the students when they enter to the classroom is reading for 15 minutes for each period. The students can be directed to read interesting texts extensively. The aims of extensive reading is to help students become better reader at the skill of reading rather than reading to study the language itself. This Indonesian's government program can be practiced to increase the students' reading habit in the institution.

To sum up, the results of the study are expected to give evidence on the successful design for teaching inquiry based learning and empower the literature of the research field. Moreover, the results of the study would be valuable points in evaluating and assessing the information in many sources. By having the critical thinking abilities, students would reflect their reading abilities successfully.

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