

**Critical Thinking: Its Representation in
Indonesian ELT Textbooks and Education**

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Abstract

My original contribution to knowledge consists in generating a new critical thinking framework that can be used to investigate the elements of critical thinking in textbooks. The framework, however, can also be used as a guideline for teachers who are concerned with the development of learners' critical thinking skills. Critical thinking has been included in an Indonesian government document as an educational objective; however, it is currently neglected and not seriously disseminated in schools.

This study attempts to investigate to what extent critical thinking has been manifested in textbooks in Indonesia and to what extent Indonesian senior secondary school students are ready for the teaching of critical thinking skills. To this end, the study investigates the elements of critical thinking contained in Indonesian ELT textbooks and students' responses to modified materials containing elements of critical thinking. Three methods are adopted: content analysis, qualitative analysis of students' written responses, and interviews. Predetermined analytic categories are used to analyse nine Indonesian ELT textbooks used by senior secondary schools. The categories have been created as a result of evaluating, examining, and synthesising Bloom's and Freeman's critical thinking taxonomies, critical thinking strategies from empirical studies, critical thinking programmes created by critical thinking authorities and critical thinking tests.

The findings of the content analysis show that the textbooks examined do contain a few elements of critical thinking. Critical thinking questions occupy 15.81% of all of the questions analysed. As the literature has stated that facilitating students' critical thinking needs to be progressive, the findings suggest that most activities in the textbooks can be used at a basic level in scaffolding to promote students' critical thinking skills and that more critical thinking activities must be developed by teachers. Promoting Indonesian students' critical thinking skills is possible as the findings of materials implementation and interviews indicate that the students have the potential to be critical. The findings also show that students are ready to accept the teaching of critical thinking skills.

Table of contents

Abstract	2
Table of contents	3
List of tables	8
List of figures	10
Acknowledgements	12
Declaration	13

Chapter 1: Introduction and thesis overview

1.1 Introduction	14
1.2 Background to the study	14
1.3 Research problem and questions	16
1.4 Justification for the study and its contributions to the field of education and ELT	18
1.5 A brief overview of the methods.....	20
1.6 The structure of this thesis	21

Chapter 2: Indonesian research context

2.1 Introduction	23
2.2 Educational system in Indonesia	23
2.3 ELT in Indonesia	28
2.4 Critical thinking and socio-political conditions in Indonesia	39
2.5 Indonesian ELT textbooks	43

Chapter 3: Review of the literature

3.1 Introduction	46
3.2 Critical thinking: A theoretical discussion	46

3.3	The discussion of various constructs of critical thinking and of their use in research	59
3.3.1	Critical thinking taxonomies	59
3.3.2	Critical thinking strategies	65
	i. A review of empirical studies containing critical thinking strategies	65
	ii. An examination of the key ideas of critical thinking strategies	78
3.3.3	Critical thinking programmes	81
3.3.4	Critical thinking tests	95
3.3.5	Equation and evaluation of key ideas of critical thinking taxonomies, strategies, programmes and tests for their use in this study	97
3.4	The implementation of critical thinking in education, especially in ELT, of non-Western countries	99
3.4.1	A debate on critical thinking in ELT	99
3.4.2	Critical thinking in non-Western education	102
	i. The importance of, and educational policies on critical thinking in non-Western countries	103
	ii. Empirical studies on critical thinking in non-Western countries	112
	iii. Reasons of adopting critical thinking and actual practices in non-Western countries	116

Chapter 4: Methodology of the study

4.1	Introduction	122
4.2	Research worldviews	122
4.3	Research scope	125
	4.3.1 Textbooks	125
	4.3.2 Participants	128
4.4	Data collection and analysis methods	129
	4.4.1 Content analysis	130

4.4.2	Qualitative analysis of text-based responses	139
4.4.3	Interview	142
4.5	Pilot study	145
4.5.1	Content analysis	145
4.5.2	Materials implementation and interview	150
4.6	Validity and reliability	158
4.7	Analysis triangulation	160

Chapter 5: Critical thinking activities in Indonesian ELT textbooks - Findings and discussion.

5.1	Introduction	161
5.2	Types of questions found in the textbooks	162
5.3	Textually-explicit questions	163
5.4	Elements of analytic categories found in the open questions	173
i.	Word clarification	177
ii.	Phrase/expression clarification	178
iii.	Sentence/clause clarification	178
iv.	Poetic expression clarification	179
v.	Supporting/arguing the answer	182
vi.	Stating the argument/reason	184
vii.	Direct-viewpoint questions	186
viii.	Viewpoint on yes/no questions	187
ix.	Viewpoint on Wh-questions	187
x.	Viewpoint on literary work-related questions	188
5.5	Elements of analytic categories found in the closed questions	195
5.6	Categories emerging outside the predetermined analytic categories	199
i.	Finding antecedent	203

ii.	Finding synonyms	205
iii.	Text analysis	206
5.7	The critical thinking categories	210
5.8	Critical thinking, literature and ESOL	215
5.9	Textbooks and critical thinking skills	220
5.10	The authors of the textbooks	221

Chapter 6: Students’ responses to modified teaching materials containing the elements of critical thinking - Findings and discussion

6.1	Introduction	224
6.2	Students’ written responses to modified reading questions	225
6.3	Students’ responses to the interview	254
6.4	Critical thinking and non-Western students	262
6.5	Critical thinking, religious beliefs and cultural background	265

Chapter 7: Conclusions

7.1	Introduction	267
7.2	A summary of findings	267
7.3	Significance of the findings	271
7.4	Limitations	272
7.5	Recommendations	273
7.6	Implications	274

Appendices

Appendix 1	278
Appendix 2	281
Appendix 3	282
Appendix 4	288
Appendix 5	297

Appendix 6	298
Appendix 7	303
Appendix 8	311
List of abbreviations	322
References	324

List of tables

Table 2.1	Competency standard of English lesson - class X semester 1	34
Table 3.1	Key ideas of Bloom's and Freeman's taxonomies having the potential to promote critical thinking	64
Table 3.2	Dantas-Whitney's audiotaped journal assignment	67
Table 3.3	Daud and Husin's descriptions of lessons	69
Table 3.4	Norris and Ennis' list of critical thinking skills	71
Table 3.5	Park's critical engagement strategies	73
Table 3.6	Shahini and Riazi's PBLT strategies	74
Table 3.7	Yang and Gamble's instructional procedure for the experimental group	77
Table 3.8	The key ideas of teaching strategies promoting students' critical thinking skills	80
Table 3.9	Taxonomy of Socratic Questions (TSQ)	82
Table 3.10	Cognitive acceleration through the Arts	83
Table 3.11	Feuerstein's Instrumental Enrichment	85
Table 3.12	Top Ten Thinking Tactics	86
Table 3.13	Six themes of CoRT programme	87
Table 3.14	Swartz and Park's Thinking Skills Taxonomy	89
Table 3.15	Six Thinking Hats	90
Table 3.16	Fisher's story-based critical thinking activities (FSBA)	91
Table 3.17	Key ideas of critical thinking programmes	94

Table 3.18	Key ideas of critical thinking tests	97
Table 3.19	The agenda of non-Western countries' adoption of critical thinking	119
Table 4.1	The list of BSE (Electronic School Books) English textbooks used by Indonesian senior secondary school	127
Table 4.2	The profiles of participants	129
Table 4.3	The predetermined analytic categories for coding	136
Table 4.4	The coding rubric for students' written responses	142
Table 4.5	The categories and their numbers & percentages	149
Table 5.1	The number of question types contained in the textbooks	162
Table 5.2	The analytic categories found in the open questions	174
Table 5.3	The analytic categories found in the closed questions	196
Table 5.4	The categories emerging outside the predetermined analytic categories	199
Table 5.5	The critical thinking categories emerging in the Indonesian ELT textbooks	208
Table 6.1	The number and percentages of students' responses to modified questions	251
Table 6.2	The type of questions and the number of students stating that the questions made them think hard	255
Table 6.3	The students' difficulties in answering the questions	259

List of figures

Figure 5.1	Column chart of the number of question types contained in the textbooks	163
Figure 5.2	Column chart of the analytic categories found in the open questions	175
Figure 5.3	Pie chart of open questions falling into the analytic categories	175
Figure 5.4	Pie chart of closed questions falling into the predetermined analytic categories	197
Figure 5.5	Pie chart of questions having the potential to promote critical thinking skills	208
Figure 5.6	Chart of the number of critical thinking categories contained in the textbooks	209
Figure 5.7	The percentages of critical thinking questions contained in the textbooks	210
Figure 6.1	Pie chart of students' responses to question of clarification	229
Figure 6.2	Pie chart of students' responses to question that probes assumption	232
Figure 6.3	Pie chart of students' responses to question that probes reason and evidence	235
Figure 6.4	Pie chart of students' responses to question about viewpoint or perspective	238
Figure 6.5	Pie chart of students' responses to the question that probes implication, consequence and alternative	241
Figure 6.6	Pie chart of students' responses to question about the question	244
Figure 6.7	Pie chart of students' responses to question about prediction	246
Figure 6.8	Pie chart of students' responses to question about agreement and disagreement	248
Figure 6.9	Pie chart of students' responses to question about summary and conclusion	251
Figure 6.10	Column chart of students' responses to modified questions	252

Figure 6.11	Pie chart of students' responses to modified questions	252
Figure 6.12	Column chart of the type of questions and the number of students stating that the questions made them think hard	256
Figure 6.13	Pie chart of responses to the question asking whether the students found difficulty in answering the questions	257

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I am solely responsible for any errors found in this thesis.

Declaration

I declare that this thesis is an original piece of work of mine. No part of this thesis has been previously published or submitted for another award or qualification in other institutions or universities. All the material in this thesis which is not my own has, to the best of my ability, been acknowledged.

Chapter 1: Introduction and thesis overview

1.1 Introduction

This introductory chapter consists of six sections. The second section provides the background to the study. The third section presents the research problem, along with the corresponding research questions the current study aims to answer. The next section presents the justification for the study and its contributions to the fields of education and English Language Teaching (ELT). A brief overview of the methods adopted is presented in the fifth section, and the final section presents the structure of this thesis.

1.2 Background to the study

As a developing country progressing toward a more democratic society and a more economically stable state and located in a very strategic area, Indonesia has realized its role in world matters. To play a more active role in this manner, Indonesia may require qualified human resources. Education is one potential means to produce Indonesians who could bring the country to greater prosperity and to its fullest role as a part of the global community. Through education, young Indonesians are expected to be critical, creative, independent, innovative, confident, tolerant, socially sensitive, democratic and responsible. These are some of the qualities clearly stated in the Regulation of the Republic of Indonesia Number 17 Year 2010. When it comes to educational management and administration as educational objectives, however, there seem to be some constraints on achieving these stated objectives.

It may not be easy to produce people with the aforementioned qualities and to make people aware of the importance of them if practices in education for young people are not clearly tailored towards those goals. One of the key stated goals is that students should be ‘critical,’ with the explanation page of the government document

mentioned above definitely stating that, in this instance, the word ‘critical’ means critical thinking.

The development of critical thinking skills, however, does not appear to have been seriously supported in primary and secondary education or widely disseminated among schoolteachers throughout the country. This idea is supported by Sadli (2002), a professor in psychology, who states that education in Indonesia does not promote critical thinking, and that Indonesian “teachers do not encourage critical thinking skills, so students do not feel challenged to think critically” (Alfianti, Prihatin & Aprilya, 2013, p. 187). This might be because Indonesian teachers do not clearly understand what critical thinking is, how to teach critical thinking, or how to infuse critical thinking into their teaching.

Aside from failing to encourage critical thinking, Indonesian school teachers still utilize traditional teaching methods; for example, teachers read aloud from textbooks, dictate, or write on the blackboard while students listen and copy (Lamb & Coleman, 2008). This results in the critical thinking skills of Indonesian students not being optimally promoted and developed. They are not accustomed to exercising their critical thinking in an educational context. This lack of practice may be why Indonesian students end up lacking refined critical thinking skills (Lewis & Pattinsarany, 2011; Pikkert & Foster, 1996).

The ways Indonesian school teachers teach may need to be changed in order to better facilitate the development of students’ critical thinking, creativity, independence, confidence, and all the qualities mentioned in the Indonesian Regulation. Apart from changes in teachers’ behaviour, school textbooks need to be adequate for classroom use and to be able to support and help teachers develop students with the abovementioned positive qualities. Qualified teachers, appropriate teaching approaches, good textbooks for all school subjects and a sound educational system must go hand in hand to achieve the government’s educational objectives.

The Indonesian government, through the Ministry of National Education, has provided school textbooks that can be downloaded by every student and teacher across the country. Apart from the free textbooks, there are also commercial

textbooks in all school subjects available on the open market, which are published by private publishers. Even though most schools use the downloaded textbooks, schools around the country are free to use any textbook they want as long as the Ministry of National Education has approved the book. Nonetheless, it is still in doubt whether the textbooks - either those provided at no cost by the government or those published in private - are able to meet the needs of students, teachers and other stakeholders, or can keep up with the development of science, knowledge and technology, or more importantly whether the textbooks facilitate the teaching of critical thinking skills.

1.3 Research problem and questions

As mentioned above, critical thinking has been on Indonesia's educational agenda as well as on that of several countries throughout Asia and Africa. In Indonesia, however, critical thinking seems to have failed to move from the document to the actual educational practices or educators. It is also not clearly stated why critical thinking is included as one of the educational objectives. This is in contrast to some countries in Asia and Africa which have declared the importance of incorporating critical thinking aims into education systems in order to, among other things, promote democracy, reform education and face the global competition.

With the teaching of critical thinking gaining popularity in education, the field of ELT has begun to include it. There are at least two advantages to critical thinking's incorporation in ELT. First, it can improve learners' language proficiency. Second, it can promote and improve their critical thinking skills. This is because in this context, English learners would be asked to think critically in their target language. Hawkins (1998) sees the incorporation of critical thinking into ELT from a different point of view and states that not teaching critical thinking to English language learners results in preventing them from achieving success. Teaching English language learners only the language skills, without critical thinking skills, equates to backing linguistic imperialism.

However, there has also been a debate regarding the incorporation of teaching critical thinking in ELT (EFL, ESL, TESOL) over the past few decades. Atkinson (1997), for example, suggests that ELT practitioners should be thoughtful about importing critical thinking into ELT. He claims that since Western and non-Western cultures are different, and critical thinking is an integral part of Western culture, it may be problematic when taught to non-Western students. The argument against incorporating critical thinking into ELT almost always takes East Asian students, such as Japanese, Chinese and Taiwanese students, as an example. A Singaporean author (Kwang, 2001) claimed that critical thinking may be difficult to develop in Asia due to Asian cultures being prone to favouring group over personal interests and a tendency to maintain social order and harmony. He also claims it is difficult to develop because Asian students try to avoid losing face, tend to obey teachers as authority figures, and respect parents. Though he is Singaporean, his claims may also include other people of South East Asia such as those in Indonesia, Malaysia, Thailand, the Philippines, Brunei Darussalam, Cambodia, Vietnam and Myanmar.

The claims that critical thinking is difficult to encourage in Asia (and other non-Western countries) due to the characteristics of Asian people have never been proven. Also, there do not seem to be any studies which confirm that infusing critical thinking into ELT is problematic. Conversely, several sporadic studies conducted in Asian (non-Western) countries have proved that critical thinking is possible and successful in ELT, and Asian (non-Western) students' critical thinking skills can be improved (e.g. Daud & Husin, 2004; Yang & Gamble, 2013).

As mentioned, critical thinking has been on the Indonesian educational agenda but despite this, there have been very few academic studies on critical thinking in the Indonesian education system. The present work shows that there has never been research conducted on critical thinking in Indonesian school textbooks. As such, this study responds to the idea of critical thinking, ELT and Asian (non-Western) students by investigating critical thinking in the Indonesian setting. Since two main aspects, namely ELT and Asian students, are the foci discussed here, the study poses two research questions. They are (1) Do Indonesian ELT textbooks facilitate

the teaching of critical thinking skills? and (2) How do Indonesian students respond to modified teaching materials containing the elements of critical thinking?

The results of this study are expected to shed light on at least two main points. The first point is to what extent Indonesian ELT textbooks contain elements of critical thinking. If there are elements of critical thinking found in the textbooks, it may be inferred that critical thinking can be infused into ELT, providing an argument against the existing doubt toward the infusion of critical thinking into this field. Furthermore, if the elements of critical thinking found in the textbooks are few in number there should be an effort to incorporate more critical thinking activities to support the educational objectives of the Indonesian government.

The second point is that if Indonesian students can answer critical thinking questions, it shows that Indonesian (who are both Asian and non-Western) students have the potential to be or are already skilled at critical thinking. Therefore, teaching critical thinking to Indonesian students may be possible, and the Indonesian government can be more serious in promoting critical thinking as it is already given as one of their educational objectives.

1.4 Justification for the study and its contributions to the field of education and ELT

As a developing country, Indonesia is still struggling with educational problems. One of the problems is that many Indonesian schoolteachers are still underqualified (Ahiri, 2007; Aris, 2007; Hartati, 2009; Mahdiansyah, 2009; Mursidin, 2010; Sanaky, 2005). Another problem is that the quality of school textbooks is still considered unsatisfactory (Sholeh, 2008). This may lead to a low quality of education (Alawiyah, 2011; Hartati, 2009), and that may be the cause of the quality of human resource personnel in Indonesia being behind (Atmanti, 2005) when compared to other countries in Asia. These problems seem to be slowing the development of critical thinking in education.

As mentioned, critical thinking has been included in Indonesia's educational agenda. However, the government document does not elaborate on what kind of critical thinking is needed by the country. The concept of critical thinking itself is elusive (Moon, 2008) and there is confusion over defining and characterising critical thinking. Every scholar has his/her own definition of critical thinking. Some studies (e.g. Ahern, O'Connor, McRuairc, McNamara, & O'Donnell, 2012; More, 2011; Krupat, Sprague, Wolpaw, Haidet, Hatem, and O'Brien, 2011) have attempted to find out what scholars have in common with regard to their definition of critical thinking; however, the studies fail to form an agreed-upon definition and characterization of the concept of critical thinking.

Critical thinking has been fashionable in education in Asian, African and predominantly Muslim countries. Several countries in Asia and Africa such as Singapore, Malaysia, Japan and South Africa have incorporated critical thinking into their educational agenda. Similar to Indonesia, however, there is very little information as to what extent critical thinking has been applied in those countries. It is true that there have been some studies on critical thinking conducted in those countries (e.g. Daud & Husin, 2004; Fung & Howe, 2014; Roy, 2014; Yang & Gamble, 2013; Yang, Gamble, Hung & Lin, 2014), but the studies have not proven that there has been an implementation of critical thinking in their educational systems. There seems to be a gap between the educational policy and the actual practice in the countries that have pronounced critical thinking as one of their educational objectives. This is similar to the gap that currently occurs in Indonesia.

The research undertaken for this thesis attempts to propose a method to investigate critical thinking in educational settings by generating a critical thinking framework. This may be beneficial not only for Indonesia but also for other non-Western countries that have been eager to promote critical thinking in their education. In addition, this framework may be applied not only in ELT but also in the teaching of other school subjects.

1.5 A brief overview of the methods

As mentioned, there are two research questions posed in the study. The first research question is ‘Do Indonesian ELT textbooks facilitate the teaching of critical thinking skills?’ To answer this question, the study adopts a content analysis methodology focused on text-based questions. The term ‘questions’ here also refer to tasks. The texts in this study include a variety of texts such as poems, articles, announcements, play scripts, posters, tables etc., which are followed by questions. The questions are analysed as to whether they contain the elements of critical thinking as defined for this research.

It is clear that a critical thinking framework is needed to analyse the questions. Since there has been very little information from the literature with regard to a critical thinking framework to analyse the elements of critical thinking in textbooks, this study may be considered innovative in constructing a new framework which could act as a possible contribution to the knowledgebase.

The analytic categories in the framework are obtained from synthesising, examining and evaluating critical thinking taxonomies (Bloom’s and Freeman’s taxonomies), critical thinking strategies from empirical studies in ELT proposed by researchers, critical thinking programmes created by scholars, and critical thinking tests composed by authorities. As a result of examining those critical thinking taxonomies, the analytic categories consist of nine elements probing ‘clarification,’ ‘assumptions,’ ‘reasons and evidence,’ ‘viewpoints or perspectives,’ ‘implication, consequences and alternatives,’ ‘question,’ ‘predictions,’ ‘agreement and disagreement,’ and ‘summary and conclusion.’ However, the analytic categories constructed are not a fixed framework. During the data coding stage the study is open to the possibility of new emerging categories.

The data is coded using the analytic categories, which generates qualitative and quantitative data. The qualitative data is the information surrounding the critical thinking categories coming from the text-based questions. The quantitative data are the numbers and percentages of questions falling into the stated categories. The data found is used to support the discussion of the research question at the analysis stage.

The second research question explores Indonesian senior secondary school students' responses to critical thinking activities. The complete question is "How do Indonesian students respond to modified teaching materials containing the elements of critical thinking?" To answer the question, the study follows two complete stages.

The first stage involves a reading activity from a unit of a textbook and adds additional reading activities based on the nine analytic categories of critical thinking as mentioned above. The modified reading material is administered to Indonesian ELT students who are given one hour to answer the questions. The students' answers are analysed using a coding rubric and are categorised into three groups: unacceptable, acceptable and good. The 'good' group shows that there are critical thinking elements in the answer. This process generates both qualitative and quantitative data. The quantitative data take the form of percentages falling into the three groups and support the qualitative analysis.

The next stage is interviewing participating students. An interview is conducted to investigate five unique points. The first point is whether the modified questions make them think. This is followed by an examination of which questions make them think harder if the response to first question is 'yes.' The third question asks students whether they found any difficulty in answering the questions. If they respond in the affirmative, then they are asked to mention the difficulties. The final question asks what students feel if in any school subject they are asked to think, comment, opine and argue. To put the students at ease, the interview is conducted in Indonesian and they are informed that their responses will not be held against them.

1.6 The structure of this thesis

This thesis consists of seven chapters. The next chapter, chapter two, discusses the Indonesian research context. The chapter discusses the educational system in Indonesia in the second section. The third section talks about ELT in Indonesia, presenting a brief history of ELT in a discussion of how the teaching of English during the Dutch colonial era laid the foundation for critical thinking and how the

teaching of foreign languages during the era could be considered successful. The fourth section concerns critical thinking and socio-political condition in Indonesia. This chapter ends with the section discussing Indonesian ELT textbooks.

Chapter three reviews relevant literature. The chapter reviews three strands of critical thinking under the title of 'A theoretical discussion of the various types of critical thinking' with the third strand, Western democratic tradition thinking, being adopted in this study. This chapter also reviews the discussion of various constructs of critical thinking and of their use in this research and a debate on critical thinking in ELT. Finally this chapter reviews critical thinking in non-Western education.

Chapter four is the methodology of the study. It explains the methods adopted and how they are conducted as partly mentioned in the previous section. Chapter five presents and discusses the the results of the study connected to the first research question, while chapter six discusses the findings to answer the second research questions.

Finally, chapter seven, a conclusion chapter, closes the thesis by presenting the contributions of the study to knowledge, limitations of the study and recommendations for the future. The first recommendation is for further study, and the second recommendation provides aims for practice and policy in Indonesian education with respect to the teaching of critical thinking skills.

Chapter 2: Indonesian research context

2.1 Introduction

This chapter presents five sections: an introduction to the chapter, the educational system in Indonesia, ELT in Indonesia, critical thinking and socio-political conditions in Indonesia, and Indonesian ELT textbooks. The second section, the educational system in Indonesia, presents a very brief history of education in Indonesia and investigates what may have caused critical thinking to become an educational objective while it still seems to be neglected in education. The third section, on ELT in Indonesia, provides a brief history of ELT, starting from the Dutch colonial era to the era after independence. The fourth section presents the socio-political conditions in Indonesia connected to the importance of critical thinking to address issues faced by the country. The final section presents Indonesian ELT textbooks. The section discusses the textbooks that do not prioritise critical thinking skills.

2.2 Educational system in Indonesia

The quality of education in Indonesia is still considered unsatisfactory. In 2001, the PERC (Political and Economic Risk Consultancy) reported that Indonesia had the worst education system of 12 Asian countries considered, and Nilan (2003), a senior lecturer in Sociology at the University of Newcastle in Australia, found that Indonesian pupils “are encouraged to learn by rote and produce lists of facts in compulsory examinations, an approach which neither stimulates creativity nor provides better foundations in English, mathematics and computer skills, all of which are needed to develop a globally competitive economy” (p. 566). On the other hand, critical thinking, along with creativity, innovation, independence and tolerance is one of educational objectives that has been officially written into the Regulation of the Republic of Indonesia Number 17 Year 2010 Regarding Educational Management and Administration.

From the historical perspective, education during the colonial era was not intended to promote critical thinking. The Netherlands, which colonized Indonesia for longer than Portugal, Spain, England, or Japan, built schools all over the Indonesian archipelago; nevertheless, the schools were set up for the betterment of the colonial government. For example, the schools were divided into two categories: one for locals and another for foreigners. Local people could only study until the elementary level, as it was almost impossible for them to continue their education at higher levels. This was intended to produce low-level administrative employees of the locals, in favour of Dutch enterprises, while controlling Indonesian viewpoints (Handayani, 2008).

During the Dutch colonial era, Protestant priests from *Utrechtse Zending Genootschap* came to Indonesia and also built schools, though their purpose was not to promote independence, critical thinking or intellectual awareness. They came to Indonesia with a mission to spread religion. For example, in Bali, one of the provinces in Indonesia, they built HIS (Hollands Inlandse School) to attract locals to attend so they could teach them Christianity (Agung, 1993). The Protestant missionaries showed their serious intent in spreading Christianity by building a school for Bible teachers named *Hulpzendingen* in South Sulawesi province in 1868 (Hermawan, 2007).

The Dutch mission to restrain the intellectual level of Indonesians was not fully successful. A result of this formal education, including that provided by missionaries, was the kindling of awareness of a desire for independence. The intellectual awakening of native Indonesians gradually grew, and many of these individuals built schools, including Islamic schools, that were not affiliated with the colonial government. This showed a good foundation of the development of critical thinking in Indonesia, though critical thinking was still not promoted in education under the colonial government. Conversely, the government attempted to curb nationalist movements and arrested those involved in the movement, including Indonesians studying in the Netherlands. The Dutch arrested Indonesian students Bung Hatta, Abdul Madjid and Ali Sostroamidjojo and prosecuted them in Den

Haag court (Alam, 2003). They were accused of promoting the liberation of Indonesia abroad, which could threaten the existence of the colonial government.

After independence in 1945, the educational system in Indonesia still did not promote critical thinking. The new government was busy building schools across the country and producing schoolteachers, which may mean it did not have time to alter the curriculum. It was not difficult to become a teacher at that time. For example, to be an elementary school teacher, one had to complete teacher's high school for three years after completing junior secondary school. Teacher's high school was similar to senior secondary school. Though the government built some 60,000 primary schools around the country (Suryadarma, Suryahadi, Sumarto, & Rogers, 2006) and the number of higher learning institutions during the period also increased (Kristiansen & Pratikno, 2006), the quality of teachers and education was unlikely to be a priority.

Another factor why critical thinking was not popular during this period was that rote learning was widely adopted. Teachers asked students to memorize their lessons. This was a favourite teaching approach as school examinations stressed memorization through the material they tested (Muktiono, 2003). This happened in teaching not only social sciences but also natural sciences such as physics and mathematics (Suryadi, 2007). This condition was fostered through televised national competitions between students from all levels of education. For example, in the 1980s TVRI (a National TV Channel), the only TV station at that time, broadcast a national competition among elementary, junior and senior secondary students. The competition tested students' memorization on all subjects learned at school, and it was very prestigious. The winners were usually regarded as intelligent students. The schools where the students studied became famous and were considered successful in conducting teaching-learning processes. The competition lasted for several years. Up until 2005, an observation by Bjork (as cited in Zulfikar, 2009) was that rote learning was still a favourite teaching approach in the country.

A similar situation happened in Islamic education, which also did not promote critical thinking. In the early period of independence, traditional *pesantren* (Islamic

Boarding Schools) which were led by a *kyai* (religious teacher) adopted a completely teacher-centred approach. The *kyai* became the central figure (Zahro, 2004), and pupils were expected to not criticize him. Memorization was a very common practice of the teaching of Quran and religious principles, without discussing religious thoughts that were developing in the world at that time.

In part, the lack of critical thinking during this period, the period called ‘New Order’ regime under the leadership of former President Soeharto who controlled the country for more than 30 years, might also have been caused by the political conditions. Campuses where students often demonstrated were controlled, and a subversion law was enacted. Political activities on Indonesian campuses were prohibited and voices, including those printed in newspapers, against government policies were stifled. Anyone acting against the government policies was put in jail under violation of the subversion law. This happened to some university students in big cities in Indonesia from 1993 to 1997 (Widjojo & Noorsalim, 2004). There was no freedom of speech. Reid (2012) states that “new order authoritarianism suppressed critical thinking and shut down virtually all public spaces for contestation that challenged government policies” (p. 147). As a result, it was difficult for critical thinking to prosper.

A new political condition in Indonesia forced President Soeharto to step down. The era referred to as the ‘reformation’ emerged, followed by changes in educational policies. The environment became more democratic and the seeds of critical thinking began to appear. For example, in the Islamic education system, many *pesantren* adopted the national curriculum and promoted the English language, along with Indonesian or Arabic, as the medium of teaching and learning. They “demonstrate a synthesis in curricula and pedagogy between two meta-discourses of schooling: the maintenance of normalized traditional moral values; and the production of skilled modern citizen for the *ummah* (people) and for the rapidly modernizing state” (Nilan, 2009, p. 221). Another change that seemed to promote the seeds of a critical society was the role of Islamic higher institutions in making people more tolerant and open-minded, as Islamic schools were finally recognized as a great national asset (Zuhdi, 2006). The existence of Islamic higher institutions

has contributed significantly to the advancement of Indonesia as a pluralistic nation, especially in promoting moderate Islam, as Kraince (2007) describes:

Another value emphasized by the Islamic higher education sector is tolerance of other faith traditions as well as of other interpretations of Islam. Educators at the nation's leading Islamic universities have promoted an inclusive approach to the analysis of religious issues. For this reason, Islamic colleges and universities have frequently emphasized the importance of dialogue among religious groups and encouraged both students and staff to take on leadership roles in facilitating dialogue between groups in conflict over religious matters. (p. 351-352)

This was good for the foundation of critical thinking development in Indonesia. However, critical thinking was not yet included as a fundamental goal in the educational system.

Critical thinking started to gain attention in education in Indonesia due to several factors. First, to speed the development of the nation and to be on a par with its neighbouring countries, the government, through the Ministry of National Education, started to send lecturers abroad in 2008 through state budget funding. In 2009 there were some 590 Indonesian lecturers studying in 24 countries outside of Indonesia, for example, in the USA, England, Canada, Australia, Germany, and Japan, for Master and Doctoral degree (<http://www.dikti.go.id/>). Second, interaction between Indonesian and foreign academics also increased. Some of the lecturers studying abroad undertook educational studies. Some academic interaction involved discussions of recent developments in educational approaches. Those involved in educational studies may have grown acquainted with alternative approaches, such as critical thinking, that could promote a deeper learning when compared to the existing approaches in Indonesian education. This helped the concept of critical thinking permeate into the minds of Indonesian academics. Some of these academics voiced their concerns about the educational conditions in Indonesia. One such academic is Saparinah Sadli, a professor in psychology from the University of

Indonesia. Sadli (2002) commented that the “Indonesian educational system does not actively stimulate students to develop critical thinking or teach them that while differences of opinion should be respected, a point of view can be rejected on the basis of clear argument” (p. 80).

Though critical thinking has been included as an educational objective, it has not been widely applied in education in Indonesia until the present. This can be seen in a recent concern put forward by a university lecturer, Suparno, in response to the government’s plan to change the elementary school curriculum. Suparno (2012) writes that “the new curriculum should meet several criteria such as helping students develop critical thinking and decision making skills and allow students the freedom to think” (p 6). There may be several reasons as to why critical thinking still does not move from the Government document to classroom activities. First, as this is a new concept in Indonesian education, most schoolteachers across Indonesia may not understand yet how to be critical and how to promote critical thinking skills in their teaching activities. Second, the government does not seem to be serious in promoting critical thinking. This is demonstrated in the fact that there is no critical thinking training provided to teachers, no critical thinking curriculum in the teacher training faculties at Indonesian universities and no critical thinking criteria included in textbook evaluations. This may be due to the difficulty in finding proper instructors, an inadequate budget to train millions of teachers all over the country, the lack of an agreed concept of critical thinking, especially the one needed in the Indonesian context, or, possibly, political interest. Consequently, as has been mentioned, most teachers in Indonesia still adopt rote learning and rely heavily on textbooks in their classrooms. There seems to be a gap between the educational objective and the educational practice.

2.3 ELT in Indonesia

The Regulation of the Minister of National Education of the Republic of Indonesia Number 22 Year 2006 Regarding the Standard of Content for Class-Based Curriculum of English (p. 307) states that:

Bahasa memiliki peran sentral dalam perkembangan intelektual, sosial, dan emosional peserta didik dan merupakan penunjang keberhasilan dalam mempelajari semua bidang studi. Pembelajaran bahasa diharapkan membantu peserta didik mengenal dirinya, budayanya, dan budaya orang lain. Selain itu, pembelajaran bahasa juga membantu peserta didik mampu mengemukakan gagasan dan perasaan, berpartisipasi dalam masyarakat, dan bahkan menemukan serta menggunakan kemampuan analitis dan imajinatif yang ada dalam dirinya.

Language has a central role in intellectual, social and emotional development of pupils and has a supporting role for the success in learning all subjects. Learning a language is expected to help pupils know themselves, their culture and other cultures. Besides this, learning it can also help pupils express ideas and feeling, participate in society and find and use analytical and imaginative skills within them.

Apart from knowing themselves, Indonesian cultures and other cultures, which may promote independence and tolerance, the regulation clearly mentions that ELT in Indonesia is expected to help students develop analytical skills: these skills would be difficult to obtain if ELT approaches are not congruent with the goals. One possible alternative for developing students with analytical skills, along with independence and tolerance, may be including critical thinking in ELT. Importing critical thinking into the ELT classroom as a supplement to existing teaching approaches may also support other qualities mentioned in educational objectives such as creativity and innovation, for example. Critical thinking has been a national objective in education in Indonesia though ELT still seems to ignore it.

To obtain a more thorough picture of ELT in Indonesia the development of ELT in the country, from the colonial era to the present day, needs to be explored. From the historical perspective, ELT during the Dutch colonial era could have promoted critical thinking and creativity even though the real objective of teaching English

during the era, according to the Dutch historian Vlekke (2008), was to help Indonesians who had converted to Christianity to be able to read the Bible. This could be seen from the way English was taught in the classroom. For example, the teaching of English at MULO (*Meer Uitgebreid Lager Onderwijs*), which is similar to junior secondary school at present, required students to read literary works and to respond to them. Agung (1993), who experienced education at MULO during the Dutch colonial era, explains that:

Di kelas empat pelajaran bahasa Belanda, Inggris, Perancis dan Jerman tidak lagi menyangkut soal gramatika atau penterjemahan dari bahasa Belanda ke bahasa asing lainnya atau sebaliknya. Kurikulum dalam bidang ini mencakup pelajaran mengenai perkembangan sastra (literature) dalam keempat bahasa tersebut yang sangat menarik bagi saya. Dengan cara inilah saya mengenal sejarah sastra Eropa Barat (Belanda, Jerman, Perancis) dan mengetahui sekedarnya wakil masing-masing periode perkembangan sastra itu dengan karya-karya mereka, misalnya saya mengenal nama penyair Belanda Vondel dari abad ke-16 sampai nama Douwes Dekker (Multatuli) dan Couperus dan lain-lain. (p. 56)

In grade four, the language courses such as Dutch, English, French and German were no longer about grammar or translation from Dutch to other foreign languages or vice versa. The curriculum covered the lessons on development of literature in those four languages. That was very interesting to me. This made me know literature history of Western Europe (The Netherlands, Germany, France) and know little about the representatives of each literature development period with their works. For example, I knew Dutch poet Vondel from the 16th century, Douwes Dekker (Multatuli), Couperus, etc. (p. 56)

Exposure to world literature was also experienced by Lien, the wife of a former Indonesian vice president, who attended Dutch education at VHO (*Voorbereidend Hoger Onderwijs*). This was a two-year school after junior secondary school. Through her biography, written by Janarto (2000), it is reported that:

Untuk pelajaran bahasa Inggris, misalnya, Lien tidak hanya diajar oleh Mrs. Bowdies mendalami grammar atau structure semata, tapi juga diminta mengapresiasi buku-buku sastra klasik dunia. Untuk itu, diantaranya Lien diharuskan membaca karya-karya pujangga William Shakespeare dan berbagai sastrawan besar lain. Sekaligus ia diminta membuat semacam book report, yakni risalah yang berisi ringkasan berikut ihwal karya sastra klasik tertentu. Lakon Hamlet karya Shakespeare, misalnya, telah ia bahas dan kupas habis. Masih pula ia diminta untuk menceritakan kembali isi lakon terkenal itu di depan kelas. Tak mengherankan, para murid VHO dikenal jago berbahasa Inggris dan Belanda. (p. 18)

For English lesson, for example, Lien was taught by Mrs Bowdies not only grammar or structure but also classical literature. Therefore, she had to read the works of William Shakespeare and other great writers. She was also asked to make a book report, a summary of what she had read. She, for instance, discussed deeply Shakespeare's *Hamlet*. Besides this, she was asked to retell that famous play in front of the class. It is no wonder that VHO's students had good command of English and Dutch. (p. 18)

Introducing literature, including the teaching of grammar translation, in foreign language teaching can lead to critical thinking and creativity. Stories may act as a stimulus for discussion, investigation and problem solving (Fisher, 1998) and may foster cultural exposure. The present research on English textbooks used by senior secondary students in Indonesia today found that the textbooks already provide the

four skills (reading, listening, speaking and writing), including grammar and vocabulary exercises, but are unlikely to provide much exposure to world literature, especially via the textbooks used in science and social study programmes.

The inclusion of literature in ELT, which has laid the foundation for critical thinking and creativity, unfortunately, stopped and underwent a decline during the Japanese colonial era. The arrival of the Japanese in Indonesia in 1942 (Simanjuntak, 2006), after defeating the Dutch, changed the educational policies, including ELT. One of many policies adopted by Japan was the closing of Dutch schools and banning of teaching and learning materials in Dutch and English (Mistar, 2008). In relation to this, Lamb and Coleman (2008) also comment:

The Japanese authorities decreed that no European languages were to be used in the occupied territories but, pragmatically, they also recognised that in the short term it would be impossible to introduce Japanese as the language of public administration. It was therefore decided that *Bahasa Indonesia* (Indonesian) should be used for all public purposes. (p. 190)

However, Groneboer (as cited in Mistar, 2008) writes that some schools still taught English and Dutch in secret. There were two consequences of the Japanese' coming to Indonesia. On the one hand, Indonesian, as a replacement of Dutch, was introduced extensively at schools (Wangsadinata, 2008) and then became an official language, but, on the other hand, the seeds for critical thinking and creativity seem to have left, as the Dutch teachers were also gone.

After independence, ELT in Indonesia was revived; nevertheless, it did not promote critical thinking seriously. This can be seen from the unclear objectives of ELT in early curriculums (1947 curriculum, 1952 curriculum, and 1964 curriculum). This could be understood, as Indonesia was a newly independent nation, which still lacked human resources and an educational infrastructure. It was in 1967 when, finally, the Ministry of Education and Culture, in document Number 096, released their objective for ELT. However, the term 'critical thinking' did not appear in the

document. Huda (as cited in Mistar, 2008) explains that the objective of teaching English to secondary school students at that time was to equip them with language skills for such purposes as reading textbook and reference materials, understanding and taking notes on lectures given by foreign lecturers, and being able to communicate with foreigners.

Critical thinking was still unlikely to be included in the next curriculum, the 1975 curriculum. This curriculum did not change the objectives of ELT but stressed habit formation in ELT, as it required that “English should be taught with the audio-lingual approach with an emphasis on teaching of linguistic pattern through habit-formation drills” (Ministry of Education and Culture’s document as cited by Mistar, 2008, p. 75). It would seem unreasonable to imagine how the 1975 curriculum, adopting the audio-lingual approach, could help ELT learners develop reading skills since this approach emphasizes listening and speaking (Stern, 2003): and audio-lingualism is an oral-based approach (Larsen-Freeman & Anderson, 2011). Besides this, habit formation drills are unlikely to encourage critical thinking at all.

The 1984 curriculum was released when the New Order regime was in power, though ELT still did not promote or include critical thinking. This is seen in the document from the Ministry of Education and Culture (as cited by Zaim, 1997) which reported that the objective of teaching English in Indonesia was to make students “have ability to use and understand English for reading, speaking, listening, and writing with vocabularies of approximately 4,000 words” (p. 151). This curriculum introduced communicative language teaching (CLT) (Mistar, 2008) to substitute the audio-lingual approach. However, there were some problems in implementing CLT that may have been due to, among other things, insufficient training for schoolteachers on how to use this approach in their teaching activities and the final examination still focusing on grammar (Mistar, 2008). As a result, most teachers still focused on this aspect of language teaching.

In fact, the government was not silent about the concerns of Indonesian schoolteachers’ apparent inability to adopt CLT, though critical thinking was still not included in training. For example, in 1985 there was a program named PKG (*Pemantapan Kerja Guru* or Strengthening of the work of teachers), which was

funded by loans from the World Bank and UNDP. Brian Tomlinson, an EFL professional, was appointed as an advisor in the Ministry of Education and Culture. The programme had short and long term objectives. The short-term objectives, according to Tomlinson (1990), were, among other things, motivating students to learn English, helping them gain confidence to communicate in English, and providing them with exposure to the English language and learning opportunities. The long-term objectives were enabling students to develop communicative competence in all four language skills and to develop a base of fluency and accuracy, and contribute positively to general educational development. This programme sounds good but seems to focus on creating an English environment, not promoting critical thinking. Unfortunately, the programme, which was only run in a few provinces, was stopped before it reached the whole country.

The next curriculum was the 2004 curriculum. Two years later, the curriculum was revised and completed with a competency standard and was named the 2006 curriculum. The competency standard became the guideline for teachers as lesson objectives. However, the standard did not mention critical thinking. The following table is an example of the competency standard for class X (first year) of senior secondary school semester 1.

Table 2.1 Competency standard of English lesson - class X semester 1

Table 2.1

<p>Listening</p> <p>1. Understanding meaning in transactional and interpersonal conversation in the context of daily lives.</p> <p>2. Understanding meaning in short functional texts and simple monologue texts in the form of recount, narration, and procedure in the context of daily lives.</p>	<p>Speaking</p> <p>1. Expressing meaning in transactional and interpersonal conversation in the context of daily lives.</p> <p>2. Expressing meaning in short functional texts and monologues in the form of simple recount, narration, and procedure in the context of daily lives.</p>
<p>Reading</p>	<p>Writing</p>

Understanding meaning in short functional written texts and simple essay in the form of recount, narration, and procedure in the context of daily lives and to access knowledge.	Expressing meaning in short functional simple essay in the form of recount, narration, and procedure in the context of daily lives.
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Source: government document

Given that the standard competency did not mention critical thinking, the 2006 curriculum allowed schools and teachers to develop or design their own teaching materials (Kushartanti, 2007). This is why this curriculum was also named a school-based curriculum. The independence given to schools and teachers to produce their own teaching materials was an opportunity for them to include critical thinking skills. However, this opportunity was unlikely to be utilized optimally as the concept of critical thinking may have been new to schoolteachers, and they may not have clearly understood what it is or how to apply it in teaching activities. As a result, the teachers seldom changed their teaching style. This is shown in a survey conducted by Coleman et al. (as cited in Lamb & Coleman, 2008) which found Indonesian teachers still adopted a very traditional teaching methodology in all subject areas: teachers read aloud from books, dictate, or write on the blackboard while students listen and copy. What Lamb and Coleman meant by ‘very traditional’ may be defined as teaching approaches that do not involve students’ potential to think, ask, argue, comment or reflect. As a result, Indonesian junior secondary school students achieved especially poor outcomes in key areas such as problem solving as reported by a study by World Bank in 2007 (as cited in Lewis & Pattinsarany, 2011).

In 2010, as mentioned, critical thinking was included in the government document (Regulation of the Republic of Indonesia, Number 17 Year 2010 Regarding Educational Management and Administration) as an educational objective in all levels of education. With regard to secondary education, the document (Article 77 Numbers a, b, c and d) writes:

Pasal 77

Pendidikan menengah bertujuan membentuk peserta didik menjadi insan yang:

- a. beriman dan bertakwa kepada Tuhan Yang Maha Esa, berakhlak mulia, dan berkepribadian luhur;*
- b. berilmu, cakap, kritis, kreatif, dan inovatif;*
- c. sehat, mandiri, dan percaya diri; dan*
- d. toleran, peka sosial, demokratis, dan bertanggung jawab.*

Article 77

Secondary education aims to produce pupils who are:

- a. faithful to God, morally correct, and noble;
- b. knowledgeable, skilful, critical, creative, and innovative;
- c. healthy, independent, and confident; and
- d. tolerant, socially sensitive, democratic, and responsible.

The educational objectives such as criticality, tolerance and democracy are addressed in the latest curriculum, the 2013 curriculum. This curriculum, however, is still in progress, and it has only been implemented in some schools for trial at this point. The textbooks are not complete, including the English language textbooks. As of the end of the year 2014, when this study was completed, only two ELT textbooks (grade X semester 1 and grade XI semester 1) have been published. These textbooks are not yet final and are still subject to revision. The two textbooks are not only for senior secondary school but also for senior vocational school. This is in contrast to the previous 2006 curriculum, which produced different textbooks for senior secondary and vocational schools. The 2006 curriculum textbooks were also different for senior secondary students choosing science, social study and language programmes.

In terms of improving the quality of human resources, the ‘2013 Curriculum Document’ released by the Ministry of National Education, states that Indonesian students are expected to be “qualified humans who are able to proactively answer the challenges of this ever-changing world” (p. 2). This may be responded to by the teaching of critical thinking skills. Regarding democracy, the document states that

education should produce “democratic and responsible citizens” (p. 2). This seems to address conflict and violence, which sometimes occurs in the country. The document states:

Dewasa ini, kecenderungan menyelesaikan persoalan dengan kekerasan dan kasus pemaksaan kehendak sering muncul di Indonesia. Kecenderungan ini juga menimpa generasi muda, misalnya pada kasus-kasus perkelahian massal. Walaupun belum ada kajian ilmiah bahwa kekerasan tersebut bersumber dari kurikulum, namun beberapa ahli pendidikan dan tokoh masyarakat menyatakan bahwa salah satu akar masalahnya adalah implementasi kurikulum yang terlalu menekankan aspek kognitif dan keterkungkungan peserta didik di ruang belajarnya dengan kegiatan yang kurang menantang peserta didik. Oleh karena itu, kurikulum perlu direorientasi dan direorganisasi terhadap beban belajar dan kegiatan pembelajaran yang dapat menjawab kebutuhan ini. (p. 8)

Recently, the tendency to solve problems by violence and coercion often occurs in Indonesia. This tendency can be found in young generation, for example in the cases of mass fight. Although there has not been a study showing that violence is caused by a curriculum, educational experts and public figures say that one of the causes is a curriculum which overly emphasises a cognitive aspect and restricts pupils in their classroom with unchallenging activities. Therefore, curriculum needs to be reoriented and reorganised in terms of learning loads and activities in order to answer this need. (p. 8)

This indicates that toleration, which is also one of the educational objectives written in the government document, has gained attention.

The examination of the teacher's book for grade XI from the 2013 curriculum shows that critical thinking is mentioned. The book mentions critical thinking in the 'Active Conversation' section:

***Active Conversation:** Kegiatan pada bagian ini memberi peluang kepada siswa untuk secara aktif mengemukakan pikiran dan pendapatnya dalam Bahasa Inggris sesuai konsep yang dipelajari dan konteks yang dihadapi. Kegiatan ini juga memberi kesempatan kepada siswa untuk menganalisa dan memahami pemikiran orang lain. Kegiatan ini juga memberikan ruang yang besar kepada siswa untuk mengembangkan kemampuan berpikir kritis. . (Teacher's Book, English for Secondary School, p. vi-vii)*

***Active Conversation:** The activity of this section gives an opportunity for students to actively express their mind and opinion in English suitable to the learned concept and situational context. The activity also gives them an opportunity to analyse and understand other people's mind and gives them a broad room to develop their *critical thinking* ability. (Teacher's Book, English for Secondary School, p. vi-vii)*

Finally, critical thinking was mentioned in one of the textbooks used in Indonesia, and the information from the teacher's book above seems to refer to the role the teachers must play in implementing critical thinking activities. This would be difficult if schoolteachers themselves do not know what critical thinking is. The examination of the 'Active Conversation' section of the book on page 42 does not give much inspiration for critical thinking activities if teachers are not already creative themselves. The section only asks that students complete dialogues and role-play them.

The development of ELT has progressed with the establishment of an ELT organization named TEFLIN (Teachers of English as a foreign language in

Indonesia) by ELT academics, though this organization pays little attention to critical thinking in TESOL (Teaching English to Speakers of Other Languages). Articles published in the TEFLIN journal from 1999 to 2014 reflect this. Based on a review in the present study, there were only two articles that included critical thinking in the title (TEFLIN journal document at <http://journal.teflin.org/index.php/teflin/issue/archive>). Members of this organization are mostly university lecturers, and they hold an annual seminar as an arena to present their studies. The studies, however, are unlikely to be disseminated to schoolteachers across the country. This may be connected to existing budgets and political will. In addition, Indonesian schoolteachers have their own existing concerns with an overwhelming workload as they must do unpaid work such as extracurricular activities and administrative duties, and some are still under qualified (Nilan, 2003). The problems seem to be a barrier to their professional development.

2.4 Critical thinking and socio-political conditions in Indonesia

The lack in critical thinking in Indonesia may be reflected by the lack of, among other things, tolerance, social sensitivity and democracy. Those three values, which are part of educational objectives together with critical thinking, may be able to address such issues as inequality, dogmatism, sectarianism, egocentricity and ethnocentricity. Those issues are seemingly still quite pervasive in the country.

Even though the Indonesian Constitution guarantees the freedoms of speech and expression, a small number of people may still be unable to accept differences. This may be dangerous for a very pluralistic society, as found in Indonesia. In regard to intolerance of differences, for example, it was reported by *The Jakarta Post* in August 2012 that Islamic militants burned 50 houses in a Shia (Shiite) village on Madura Island, killing one person. Shia is the Islamic minority group in the country with a different religious interpretation from the majority of Sunni Indonesians. In the same year, members of a hard-line Islamic group attacked and damaged a mosque belonging to Ahmadiyah followers and prevented them from performing religious rituals. The incident happened in Bandung, the capital city of West Java

province. Ahmadiyah is another of the minority groups in the country and is considered to deviate from mainstream Islamic teachings. *Setara*, an Indonesian human rights watchdog institute, reported that there were 129 cases of religious violence during the first semester, January-June, in 2012 (www.thejakartapost.com).

Another incident occurred in May 2012 when Muryanto (2012) reports that a group of Islamic hard-liners forcibly stopped a book discussion. Some participants attending the discussion were injured and the office where it took place was damaged. The discussion centred on the controversial book titled *Allah, Liberty and Love* written by the female Canadian author Irshad Manji. The writer herself was present, and she was accused of promoting a different interpretation of the holy book and homosexuality in Muslim societies.

Anwar (2012) argues that the attack happened as some Muslim activists had read Manji's book without critical thinking abilities and became the victims of hard-liners' propaganda. This seems to be related to Brookfield's (2012) statement that 'passive viewers' could be an easy target for manipulation; thus inferring that active critical individuals could provide a greater contribution to civilised society by contesting ideas. Anwar (2012) goes on to say that Muslims should read Manji's book critically, discussing its strengths and weaknesses and challenging her arguments with an open mind.

Sectarian violence occurred again in 2014. For example, the Social and Religious Studies Institute (ELSA) based in Indonesia reported that a group of Islamic extremists vandalised a Hindu temple in January in Sragen regency, Central Java province (Rohmah, 2014). The group was also reported to have forcibly dispersed a Quran recital meeting conducted by the Quran Interpretation Council. They accused the council of teaching Islamic principles that did not conform to those of mainstream Islam. In June, several Islamic hard-liners attacked a Pentecostal church in Sleman regency, Yogyakarta province (Muryanto, 2014) because the church had no building permit from the local government. The editorial page of *The Jakarta Globe*, the Jakarta-based English newspaper, on July 31, 2014 states that "intolerance poses a grave threat to the entire nation, and if the issue is not handled

carefully, we may face another equally dangerous possibility: disunity. Indonesians must not take religious tolerance for granted; we must work hard for it.”

(www.jakartaglobe.com).

Some Indonesian scholars and academics relate the problems of religious intolerance - even among people from the same faith - to a lack of critical thinking. One of them is Syofyan (2012), an academic from Andalas University in Indonesia, who proposes a dialogical approach in education to address the problems:

In response to increasing religious extremism, critical education must consider a dialogical approach, the end of cult personality and the strengthening of philosophy. The dialogical approach is a key to the creation of independent and free persons. Through dialogue, one learns to foster a greater balance between freedom and openness on one side as well as responsibility and control on the other. People’s awareness of dialogue will lead them to acceptance and the ability to listen to the views and needs of others.

The personal remark by Syofyan to bring the issues of democracy to the classroom is also expressed by Gutmann and Thompson (as cited in Englund, 2006) who state that “in any effort to make democracy more deliberative, the single most important institution outside government is the educational system” (p. 504). The term ‘dialogical approach’ in critical education proposed by Syofyan may refer to dialogical critical thinking (Benesch, 1999), which is a closely related concept of critical thinking. (See Chapter 3 for more explanation about Benesch’ ideas of critical thinking). Looking at the Indonesian socio-political context, what is needed is dialogical critical thinking in which students may learn to see their assumptions, practising exchanging opinions, comments or criticism. Concerning dialogical thinking in education, Benesch (1999) argues that “teaching critical thinking dialogically allows students to articulate their unstated assumptions and consider a variety of views. However, the goal is not just to exchange ideas but also to promote tolerance and social justice” (p. 576). This is supported by Daniel, Lafortune, Pallascio, Splitter, Slade, & de la Garza (2005) who state that “dialogical

critical thinking does not aim for personal victory over others' points of view, but rather improvement of the group's, or of society's perspective" (p. 350).

Dialogue, let alone critical dialogical thinking, does not seem popular in Indonesian education. Teacher-centred instruction seems prominent and very obvious in the traditional Islamic boarding schools in Indonesia. As has been mentioned, the school is led by a central figure whom pupils are not expected to criticize. A similar condition seems to exist in general schools, both government-sponsored and private schools, where rote learning and memorization still dominate. This is shown by a study conducted by Nilan (2003) in Bali province as mentioned earlier.

Similar to the lack of tolerance and democracy, Indonesian students' critical thinking skills have also been reported to be poor. This is evidenced by Pikkert and Foster (1996) through a study to determine the critical thinking skills of third year students in the English Department of Satya Wacana Christian University (SWCU) in Indonesia when compared to the skills of secondary school and university students in the USA. Their critical thinking skills were tested using *The Cornell Critical Thinking Test Level Z*. The results of the study, according to Pikkert and Foster (1996), show that:

The level of critical thinking of SWCU third year English students is much lower than that of their American counterparts. Third year English students have a lower level of critical thinking skills than secondary school students in America. Of all the subscales on the test, students scored less than satisfactory on any sub-scale. (p. 62)

The lack of critical thinking among Indonesian students has also been confirmed by low scores in problem solving when compared to the scores of other students in Asian countries based on a study conducted by the World Bank (Lewis & Pattinsarany, 2011).

Even though the above studies were conducted more than ten years ago, the present condition has not changed much. For instance, the National Final Examination (UAN) for secondary education still relies on memorization, and critical thinking

has not been introduced in the syllabus for teacher training programmes in higher education.

In sum, critical thinking is required in Indonesia to address two issues: education and socio-political conditions. Concerning education, this is expected to produce people with such qualities as knowledgeability, skill, criticality, creativity, innovativeness, and independence, as written in the government's document to respond to an ever-changing world. With regard to the latter, critical thinking may address the issues of dogmatism, propaganda and extremism, so other qualities listed in educational objectives such as democracy, tolerance and responsibility can be achieved.

2.5 Indonesian ELT textbooks

As one of educational objectives in Indonesia is to produce people with, among other things, critical thinking, creativity and independence, Indonesian ELT textbooks are expected to be able to contribute to the attainment of the objectives. To this end, the ELT textbook must foster those qualities; nevertheless, the ELT textbooks used today do not seem to prioritise critical thinking skills.

That ELT textbooks do not prioritise critical thinking skills can be seen from the policy of the BNSP (*Badan Standar Nasional Pendidikan* or National Education Standardization Body). The BNSP is a body formed by the Ministry of National Education (formerly the Ministry of Education and Culture), and its responsibility is to evaluate textbooks and authorize their use at schools. The purposes of evaluating textbooks for schools are as follows: providing textbooks which are adequate and proper to increase the quality of the national education, increasing the quality of human resources in the field of book publication, protecting learners from under qualified textbooks, and increasing the interest of reading books (the governmental document at [http://puskurbuk.net/web/penilian-buku-teks-pelajaran .html](http://puskurbuk.net/web/penilian-buku-teks-pelajaran.html)).

Textbooks that are or will be evaluated can be proposed by publishers or writers, and the BNSP focuses on four aspects: content/material, presentation, language, and graphic (the governmental document at <http://puskurbuk.net/web/penilian-buku->

teks-pelajaran.html). However, given that critical thinking has been a part of educational objective, it is unfortunate that critical thinking is not included as one of BNSP's evaluation criteria.

Adding critical thinking skills to the textbook could help ELT teachers facilitate the development of their students' critical thinking skills and achieve the educational objectives. As has been mentioned, a class-based curriculum allows teachers to be independent. They could design and develop their own teaching materials as long as lesson objectives referred to the competency standard, and this would be a great opportunity for them to include critical thinking. However, it seems that most ELT teachers still find problems in developing their own teaching materials. One problem, as mentioned, is that Indonesian teachers have heavy workloads. Another problem is that most teachers still find difficulty in developing their own teaching materials. Some difficulties, according a study by Mirizo and Yunus (2008), are brought about because teachers do not thoroughly understand the school-based curriculum concept and do not know how to apply it in their teaching-learning processes. Also, they do not know how to develop or write English teaching materials for classroom use that are suitable for their students' needs, interest, and abilities. Though teachers' inability to write teaching materials may not be directly related to their critical thinking, it could show their dependence on the textbook in their practice (Lamb & Coleman, 2008). As such, including critical thinking in the textbook could be one alternative used to promote students' critical thinking skills as textbooks have been considered to play important roles such as guiding teachers (Ur, 2009), scaffolding students' understanding (Harvey & Goudvis, 2007), and supporting teachers "who may not be able to generate accurate input on their own" (Richards & Renandya, 2008. p. 66).

To conclude, critical thinking has not yet been seriously promoted in ELT in Indonesia. No English curriculum since the colonial era has mentioned it. The PKG programme focused more on creating an English environment. Not all academics coming to Indonesia promote critical thinking in ELT, even though most of them are concerned with the unsatisfactory quality of ELT in Indonesia. This is likely to be due to their educational experience whose focus is on a different field of ELT.

Therefore, one of the feasible ways to increase the emphasis on developing critical thinking skills would be to include them in textbooks and to teach the teachers what critical thinking is and how to promote the skills. There may be a problem regarding this idea as teachers could find it difficult to work with innovative textbooks; however, the problem may be alleviated if the teachers are provided with sufficient guidelines.

Chapter 3: Review of the literature

3.1 Introduction

This chapter consists of four sections. It begins with this introductory section, followed by section two, which presents a theoretical discussion of the various types of critical thinking. There are three strands of critical thinking reviewed, and the researcher's position of critical thinking adopted in this study is clearly stated. Section three reviews the discussion of various constructs of critical thinking and of their use in research. This section reviews critical thinking taxonomies, strategies, programmes and tests, and their key ideas are examined to establish a new critical thinking framework to be used in this research. The last section presents the implementation of critical thinking in education, especially in ELT, of non-Western countries. This section proposes to highlight the gap in which even though educational policies regarding critical thinking in non-Western countries have been issued and empirical studies prove that the teaching of critical thinking in those countries may be possible, there is no information as to what extent critical thinking has been implemented in their education.

3.2 Critical thinking: A theoretical discussion

Many authors (e.g. Ennis, 1989; Halpern, 2014; Mulnix, 2012; Moore & Parker, 2009; Paul & Elder, 2006) have proposed a definition of critical thinking. Their definitions, however, vary from one to another. Ennis (1989), for example, states that critical thinking focuses “on deciding what to believe or do” (p. 4). While Moore and Parker (2009) argue that critical thinking is applying our reason to determine “whether a claim is true” (p. 3), Paul and Elder (2006) state that it is a mode of thinking to analyse, assess, and reconstruct any subject, content, or problem. Given the number and range of definitions of critical thinking, there is a clear need for settling on a working characterisation, and, given the apparent confusion, there is a sense in which anything reasonable ought to be acceptable.

The attempts at definition suggest that critical thinking can range from a general examination of life as stated by Socrates - “the unexamined life is not worth living” (Vaughn, 2008, p. 7) - to a highly targeted critique of the way power is used to create oppression and the implication that critical thinking might lead the way out of it.

For the purposes of this work, critical thinking theories will be divided into three different, unequal strands. Firstly, what might be termed the ‘Western democratic tradition’ will be examined; the other two strands are Critical Pedagogy (CP) and Critical Language Awareness (CLA). Clearly, the latter two strands may well be considered as children of the ‘Western democratic tradition’ but inasmuch as both CP and CLA have subversive aims, they will be dealt with here as separate from what is being proposed as the mainstream.

Although there may not be a direct, unbroken philosophical chain leading forward from Socrates, ‘Western’ critical thinking as it has been applied to schools-based learning and teaching, and to the teaching of language(s) more specifically, may be traced with some confidence from nineteenth-century American bases through to modern-day globalised norms. In tracing the path, the work of figures such as John Dewey followed by, among others, Stephen Brookfield, Richard Paul and Sarah Benesch may be thought of as landmarks or waystages. From Dewey forward, this tradition of critical thinking seems clearly to align with the individualist imperatives of modern democracy, exemplified by the ideals of the American constitution and ‘exported’ to the most of the world since.

The foundation of Dewey’s (1991) critical thinking starts from his belief that “more of our waking life than we should care to admit, even to ourselves, is likely to be whiled away in this inconsequential trifling with idle fancy and unsubstantial hope” (p. 2). He suggests that “thought should be trained by special exercises designed for the purpose, as one might devise special exercises for developing the biceps muscle” (p. 45).

Dewey names his concept of critical thinking ‘reflective thinking’. What he appears to mean by ‘reflective thinking’ is actually questioning things and finding the

arguments that corroborate them. Dewey (1991) argues that people usually do not question their belief and do not attempt to find the reasons of believing it as he states:

In some cases, a belief is accepted with slight or almost no attempt to state the grounds that support it. In other cases, the ground or basis for a belief is deliberately sought and its adequacy to support the belief examined. This process is called reflective thought; it alone is truly educative in value, and it forms, accordingly, the principal subject of this volume. (p. 2)

Two elements of Dewey's reflective thinking are (i) a state of perplexity, hesitation or doubt and (ii) an investigation to receive or reject the suggested belief. Dewey (2004) argues that this should be applied in education to give students the opportunity to contest ideas as he states "it is desirable that all educational institutions should be equipped so as to give students an opportunity for acquiring and testing ideas and information in active pursuits typifying important social situations" (p. 176).

Different from the other two strands of critical thinking which will be described below, Dewey's critical thinking does not seem to emphasise collectivism. It is about individualism in which every individual needs to be taught how to contest ideas and examine information. The promotion of every individual's attitude to contesting ideas and examining information are also suggested by Brookfield. More specifically, Brookfield's (1987) central concepts of critical thinking are identifying & challenging assumptions and exploring alternatives to existing ways of thinking. Regarding identifying and challenging assumptions, he states "thinking critically involves our recognizing the assumptions underlying our (individual) beliefs and behaviours. It means we can give justifications for our ideas and actions" (p. 13). He goes on to say that when ideas and actions based on assumptions might not be relevant to their lives, "critical thinkers are continually exploring new ways of thinking about aspects of their lives" (p. 8).

Brookfield also believes that critical thinking can help sustain a healthy democracy. In a rapidly changing world in which human's "conceptions of rights, obligations, duties, and appropriate behaviours have undergone major alterations" (Brookfield, 1987, p. 51), along with changes in technology, political situation and mass media communication, people could have their personal problems. Therefore, Brookfield (1987) argues that "a crucial component in developing critical thinking is assisting people to interpret their personal troubles in the context of wider social changes" (p. 60-61). This seems to confirm that Brookfield's statements, along with Dewey's conception of critical thinking, encourage personal, rather than collective, changes.

The importance of individual change is also suggested by another Western democratic tradition thinker. Paul (1990) relates an individual with the ever-changing world by stating that critical thinking is a tool to survive in a rapidly changing world and that "it is essential that we learn to think critically in environment in which a variety of competing ideas are taken seriously" (p. xv). Referring to Renaissance critical thinker such as Descartes, it is a commitment to a personal, not collective, changes which became his quest.

The most notable contribution of Paul's (1990) thought on critical thinking, however, may be his characterisation of 'weak' and 'strong' sense critical thinkers. While weak sense critical thinkers refer to people who seek individual gain, strong sense critical thinkers think beyond their personal interest as he states:

It (critical thinking) comes in two forms. If disciplined to serve the interests of a particular individual or group, to the exclusion of other relevant persons and groups, it is sophistic or weak sense critical thinking. If disciplined to take into account the interests of diverse persons or groups, it is fair-minded or strong sense critical thinking. (Paul, 1990, p. 51)

However, he believes that one could move from weak to strong sense critical thinking. This occurs, according to him, when one feels determined to see something beyond himself and is capable of seeing things in a wider scope.

In this way, Paul may seem to be moving towards a more collectivist view of critical thinking, characteristic of the more subversive takes on the concept, to be dealt with below. Paul's 'strong' sense, however, does not seem to entail collective action. Rather, he criticises 'weak' sense critical thinkers for their holding different intellectual standards for themselves and for their opponents, tending to see things from one perspective, following their commitment to egocentricity and socio-centricity, and adopting monological not multilogical thinking. 'Strong' sense critical thinkers, on the other hand, can see and accept the truth in other people's viewpoints, detect their own self-deceptive reasoning and adopt dialogical thinking. Regarding dialogical thinking, Paul (1990) states it

Involves a dialogue or extended exchange between different points of view or frames of reference. Students learn best in dialogical situations, in circumstances in which they continually express their views to others and try to fit other's views into their own. (p. 547).

Benesch (1999) has applied the idea of Paul's dialogical thinking in her EAP (English for Academic Purposes) classes by naming it 'dialogic critical thinking.' Gieve (as cited in Benesch, 1999) defines dialogic critical thinking as "a form of dialogical discourse in which the taken-for-granted assumptions and presuppositions that lie behind argumentation are uncovered, examined, and debated" (p. 576).

In her classes, Benesch introduced the topic of Matthew Shepard, a gay U.S. college student who was murdered in 1998. She chose the topic because of three reasons: fighting injustice and inequality in society, responding to an online university-wide discussion about the murder, and preventing the possible use of violence by young men in dealing with the issue. During discussion, Benesch focused on an emerging assumption and treated it dialogically: "that heterosexual men are justified in responding to the presence of homosexual men with anger or violence to assert a traditional notion of masculinity" (p. 577). She reports that this assumption gradually emerged as the discussion progressed.

What can be learned from Benesch's approaches of teaching dialogic critical thinking has to do with the role of teacher. Two roles she played were conversation facilitator and intervener. As a facilitator, she "listened, took notes, and asked occasional questions to encourage elaboration" (p. 578). As an intervener she asked the students to further examine their assumption. For example, she challenged the male students by asking if their assumption was only based on fears rather than threat.

Dialogic critical thinking, according to Benesch, can help explore students' views. Although she admits that one lesson or course cannot completely eradicate homophobia or dangerous attitudes, students can be exposed to alternative reactions to difference. During her study, Benesch (1999) was able to see students' change their views on the issue and reports:

I note that, during the discussion, the young men in my class who initially expressed contempt for homosexuals concluded that their scorn was based in fear and embarrassment. That understanding may have been the first step toward a greater appreciation of human complexity. (p. 579).

Benesch's dialogic critical thinking is basically similar to Brookfield's concept of critical thinking, identifying and checking assumption. Assumption is "a statement for which no proof or evidence is offered" (Halpern, 2014, p. 237), and it is one of critical thinking components (Halpern, 2014; Mason, 2008; Paul, 1990). However, if assumption goes unchecked, it may lead to a wrong view. Dialogic critical thinking with its attempt to explore assumptions could therefore be applied in education in a response to the rapidly changing world.

This strand of critical thinking, the combination between Dewey and Brookfield's thoughts along with those of Paul and Benesch anchored in the Western democratic tradition, is likely to be both suitable for and potentially successful in Indonesia. First of all, this type of critical thinking promotes the examination of belief and assumption. As mentioned, Indonesia is a multi-ethnic society as Gershman (2002) reports that "Indonesia is the world's fourth-most-populous nation. An archipelago

of more than 17,000 islands, of which 3,000 are inhabited, Indonesia has 360 tribal and ethno-linguistic groups, about 25 language groups, and over 250 different dialect groups.” Violence spurred by religious and racial intolerance which is based on wrong assumptions have happened.

To counter this violence, critical thinking by checking assumptions, as proposed by Dewey and Brookfield, can be adopted. Students’ assumptions regarding different beliefs can be explored to make them realise that what they assume so far concerning different religions (ethnics) are based in fear, for example. This is similar to what Benesch (1999) did in uncovering and examining students’ assumption about different sexual orientation.

The ‘Western’ democratic tradition is concerned with encouraging individuals who can critically respond to and contest any information, thoughts and ideas to promote active participation of the society to sustain democracy. The promotion of individualism in this guise seems to sit comfortably with the aspirations of Indonesian authorities, focusing as it does on commitment to individual changes as a response to an ever-changing world.

With its quasi-hegemonic understanding of critical thinking in education as individual reflection, this 'Western' approach has itself been the subject of further critical thinking. Two attempts at overthrowing this hegemonic, by-now conventional view are represented by CP and CLA as mentioned above. CP is here represented by Freire, while CLA is represented by Critical Discourse Analysis (CDA). To an extent, Freirian thinking has been incorporated into mainstream education. In highly capitalistic, commodity-driven societies, many educationalists - from curriculum developers through to teachers - have made use of this second strand of critical thinking to make students aware of inequities.

Freire’s thoughts developed in Brazil in the middle of political chaos in the 1960s (Irwin, 2012) and dreadful conditions of the poor. This influenced his thoughts, mainly focusing on how the poor referred to as ‘the oppressed’ can liberate themselves from the ‘culture of silence’ and change their condition.

This thinking is concerned with a pedagogy which can transform individuals in the society who are aware of themselves, can see the social condition of the society and take action to change the condition for their betterment (Freire, 1993). This, according to Richard Saul in the 'Foreword' to Freire's *Pedagogy of the Oppressed*, is a subversive pedagogy.

Indebted to Marx, Freire argues that the oppressed are the victims of social, economic and political domination. This includes educational systems. What he found was an educational system which produced passive individuals; however, he also believed that through education they could be liberated from 'the oppressors' to be active participants who can transform both themselves and the society. Education therefore, according to Freire (1993), should not be "an act of depositing, in which the students are the depositories and the teacher is the depositor" (p.53) because this makes students passive citizens who cannot look at their social condition critically. This is what he refers to as banking education, which he claims will reduce students' creativity and will never liberate them to be critical towards their surroundings and to participate in transformation. He (1993) argues that "the capability of banking education to minimize or annul the students' creative power and to stimulate their credulity serves the interests of the oppressors, who care neither to have the world revealed nor to see it transformed" (p. 54).

Freire promotes liberating education. What he means by liberating education is that "criticism in the liberatory class goes beyond the subsystem of education and becomes a criticism of society" (Freire & Shore, 1987, p. 35). He therefore criticizes some movements such as the New School Movement and the Progressive or Modern School Movement. The movements attempt to change traditional teaching-learning processes by promoting learner-centred approaches and critical thinking. Such movements, according to Freire, only promote criticism inside the class and only stay at the level of school, not reaching the larger society. This is not liberating education as students will not be aware of the condition of the society they live in. He argues:

For me, one characteristic of a serious position in liberating education is to stimulate criticism that goes beyond the walls of

the school - that is, in the last analysis, by criticizing traditional schools, what we have to criticize is the capitalist system that shaped these schools. (p. 35).

There are at least four criticisms of Freire's thinking which are relevant here. One deals with the way he argues "in an either/or way" (Smith, 2002). He positions people either as the oppressed or the oppressor. Smith argues that if this is taken literally, it can make for simplistic or political analysis. This positioning is also criticised by Schugurensky (1998) who states that the thinking presents:

A dualistic view of reality through pairs of opposites in which one is the preferred option, like banking education and problem-posing education, oppressor and oppressed, culture of silence and dialogue, alienation and solidarity. If each proposition presupposes its opposite, it is asked whether, ontologically, the preferred polarity actually exists. (p. 8)

Another criticism may be directed towards Freire's thinking about banking education. According to him, banking education only creates passive people since knowledge is only spoon-fed from educator to students. However, Freire's liberatory practice can also be considered banking education. This is because what he does involves "smuggling in all sorts of ideas and values under the guise of problem-posing" (Smith, 2002).

The third criticism presented by Schugurensky (1998) concerns "the directiveness of the educational process" (p. 7). Freire proposes a dialogue between teacher and students in which teachers should not impose the content. This implies that he supports a non-directive model. There is an internal contradiction in this model: "how can the content and direction of the educational process be determined by both the teacher and the learners on equal footing, when the teacher has an a priori destination (e.g. the development of a critical consciousness) to reach at the end of that process?" (p. 7).

The fourth criticism deals with the implementation of Freire's emancipatory education. Schugurensky (1998) reports that many adult educators appreciate his

thinking; however, they regret that he does not provide a specific method for teaching adults how to read and write or give practical suggestions that can be used in the teaching-learning processes.

Less 'incorporated' is CLA, which is the Marx-inspired CDA take on critical thinking. Similar to Freire in that the emphasis is on revealing forms of oppression but perhaps with a more revolutionary programme and, relevant here, with a take on language learning, CDA is linked to power and capitalism and reflected in, for instance, the thinking of Norman Fairclough and Catherine Wallace. CLA, according to Fairclough (1999), deals with the issue of the new global capitalism with its neoliberal economic discourse and argues that awareness of this discourse is necessary for two reasons: on the one hand for giving the chance to obtain an economy-based knowledge and a search for new opportunities for social relationships and identities, and on the other hand:

For resisting the incursions of the interests and rationalities of economic, governmental and other organisational systems into everyday life — such as the commodification of the language of everyday life, the colonising incursions of textually mediated representations and the threat of global capitalism to democracy, for example, in the ways it manipulates national governments.
(Fairclough, 1999, p. 78-79)

Fairclough (1989) argues that language has been used by some people to maintain their domination, so the consciousness of language contributions to domination should be raised. He states that such increasing awareness can contribute to social emancipation, which is “primarily about tangible matters such as unemployment, housing, equality of access to education, the distribution of wealth, and removing the economic system from the ravages and whims of private interest and profit” (p. 234).

According to Fairclough, social contexts such as the activities of trade union branches, political organization and informal meeting in workplaces, homes, or cafés can be used as a place to promote CLA for social emancipation. Other social

contexts are educational, such as schools, colleges, or on-the-job training.

Fairclough (1989) states that the purpose of promoting CLA in schools is to develop not only an individual child but also “collective capabilities of children from oppressed social groups” (p. 239). In short, he argues that CLA should be “a facilitator for ‘emancipatory discourse’ which challenges, breaks through, and may ultimately transform the dominant orders of discourse, as a part of the struggle of oppressed social grouping against the dominant bloc” (p. 239-240).

Preparing students to challenge, contradict and assert domination, according to Fairclough (1989), can also be through the teaching of ESL (English as a Second Language). He argues this is because ESL teachers often deal with students coming from disadvantaged societies who experience racism and oppression. He goes on to say that the educational process “must be grounded in a dialogue about the meaning of power and its encoding in language” (p. 235).

Fairclough’s concept of critical thinking touches the issues of making people (students) aware of the language representing neoliberal discourses. He urges people to contest discourses that the new global capitalism has created and to respond to their possible threats to democracy.

Similar to Fairclough’s concept of critical thinking originating in CDA in which power is manifested in language, Wallace’s conception of critical thinking is also based on the idea of language awareness. She states that the concept of CDA needs to be translated into pedagogic action, and advances the idea of critical reading. Wallace’s (2003) position on her critical reading approach is very clear: “raising students’ awareness of how the uses of language in all its realisations serve to perpetuate dominant discourses and the ideologies they encode” (p. 2). She argues that effective readers need to be aware of ideological content by contesting the texts’ ideological assumptions and propositional knowledge. What she (2003) means by ideological assumptions, borrowing the term from Fairclough, is “the common-sense assumptions which help to legitimise existing social relations and differences in power” (p. 60-61).

To achieve her conception of critical reading, Wallace (1992) proposes text and classroom procedures. She argues text selection should be based on its potential to raise issues and offer alternative discourses. While the former, according to Wallace (1992), adopts Freire's approaches in which learners identify issues by themselves, the latter deals with how the description of things can be varied depending on the author's viewpoints.

Considering classroom procedures for critical reading, Wallace (1992) proposes some pre-, while- and post- reading activities. In pre-reading activities, for example, "students can be encouraged to raise their own questions about texts rather than answering given questions which dictate a way of reading the text" (p. 114). While-reading activities can offer learners various ways of reading a text, and "post-reading activities can serve the purpose of heightening the reader's awareness of other ways in which the topic could have been written about" (Wallace, 1992, p. 120).

In post-reading activities, Wallace gives an example by giving students two texts with a similar topic. The texts are about a Nigerian girl Ndidi, who travelled into the forest. One story states it is the mother who saves Ndidi, but the other states that the hero is the father. She claims this kind of task can draw students' attention towards and awareness of different text' representation of gender, which can result in women being misrepresented.

A major criticisms of CLA in general is that it only takes one viewpoint, namely the Marxist one (Davies, 2007) and rejects other viewpoints. It may therefore be thought of as 'monological thinking' (Lipman, 1994) and fall into what Paul (1990) refers to as the 'weak-sense' critical thinking category, a type of critical thinking which favours a particular group. In this way CD analysts only every find 'what they expect to find, whether absences or presences' (Stubbs, cited in Davies 2007).

Another, connected criticism is that critical discourse analysts exploit the language by selecting and interpreting partially. This is argued by Widdowson (as cited in Davies, 2007) who states that they "expose how language is exploited in the covert insinuation of ideological influence to their satisfaction by the careful selection and

partial interpretation of whatever linguistic features suit their own ideological position and disregarding the rest” (p. 142).

The overtly political approach of CDA may be compared to the more covert politics of what has here been termed the 'Western' tradition. With respect to the Indonesian constitution, CDA is unlikely to be suitable for at least two reasons. Firstly, Marxist ideology is not the aim of the country. Indonesia has its own official philosophical foundation called 'Pancasila,' which comprises five principles, among which are belief in God, which is opposed to Marxist's atheistic ideology and democracy guided by the inner wisdom in the unanimity arising out of deliberations amongst representatives, clearly opposed to Marxist-inspired dictatorship.

Since the reformation era in the 1990s, Indonesia has constituted itself as a parliamentary democracy: the country is no longer governed by a single authoritarian power dominating all aspects of life. The governmental power is shared by several parties winning the seats in parliament through democratic general election for five years. What the country seems to need, then, are critical responses to government policies in order to sustain democracy and to promote just humanity, represented in Pancasila, as well as tolerance, listed in educational goals.

Building a democratic state seems to point to the need for individualistic reflection and away from revolutionary upheaval. While it may be important to make students aware of power strata and of the risks of oppression, the experience of the Soviet Union suggests that, at least for the time being, Marxist-inspired approaches to education (CP and CLA) do not lead in the right direction. Critics of CDA seem to lead back to the central argument for a balanced, reflective take on critical thinking, which will also therefore serve as the theoretical basis for the research questions addressed in this thesis.

3.3 The discussion of various constructs of critical thinking and of their use in research

The previous section has established the theoretical position on critical thinking, which follows Western democratic tradition represented by such figures as John Dewey, Stephen Brookfield, Richard Paul and Sarah Benesch, who encourage critical responses to the rapidly changing world where people's lives are bombarded with information with its own agenda. Through critical thinking, they are expected to be active and responsible citizens, thus promoting independence & toleration and sustaining democracy; these three points are mentioned in the Indonesian government's education objectives. Having established this position, this chapter now considers the application of critical thinking to education and to ELT, by discussing various constructs of critical thinking which can be found on the established theoretical basis.

To this end, this section reviews and examines critical thinking taxonomies (subsection 3.3.1), strategies (subsection 3.3.2), programmes (subsection 3.3.3), and tests (subsection 3.3.4). As a result of reviewing and examining the critical thinking taxonomies, strategies, programmes and tests, key ideas are generated and presented at the end of each subsection. Then the entirety of the key ideas are examined to establish a new critical thinking framework to be used in this research (3.3.5).

3.3.1 Critical thinking taxonomies

This subsection intends to generate the key ideas of critical thinking taxonomies. Two taxonomies, Bloom's and Freeman's taxonomies, are reviewed and examined: both clearly exemplify the established 'Western' strand of critical thinking. Bloom's taxonomy for example, as reviewed below, can help promote students' viewpoint and reasoning, two important points in responding to a rapidly changing world and sustaining democracy. Similarly, some points of Freeman's taxonomy, which partly originated from Bloom's taxonomy, support the position on the 'third strand' of critical thinking: critical thinking promoting independence, toleration and

democracy. The key ideas of these two taxonomies are then connected and equated with those of critical thinking strategies, programmes and tests.

Bloom's renowned taxonomy appeared in 1956 and acclaimed as a tool to classify intended behaviours with regard to mental acts as a result of educational experiences (Moseley, Baumfield, Elliot, Gregson, Higgins, Miller, Newton, 2005). With three domains (affective, psychomotoric, cognitive) being proposed by Bloom's taxonomy, this study only reviews the cognitive domain as it is closely connected to critical thinking. Besides this, Moseley et al. state there is a considerable overlap between affective and cognitive taxonomies, which is admitted by the creators themselves. The term *Bloom's taxonomy* used in this thesis refers to the cognitive domain.

Bloom's taxonomy consists of six categories, starting from 'knowledge' as the lowest stage to the next stages such as 'comprehension,' 'application,' 'analysis,' 'synthesis' and 'evaluation.' According to Bloom (as cited in Moseley et al., 2005) each category need the skills from the lower category. For example, the application category needs the skills and abilities of comprehension. Similarly, evaluation, which is the highest stage in the taxonomy, demands the skills and abilities of synthesis.

There is, however, some criticism of Bloom's taxonomy. Wood (as cited in Moseley et al., 2005) found that it was difficult for teachers to differentiate between two higher-order categories: analysis and evaluation. Moseley et al. also report that many authors have criticised the 'evaluation' category as the highest stage. That is why Ormell (as cited in Moseley et al., 2015) proposes that "the idea of a cumulative hierarchy between categories should be abandoned and replaced by a set of six parallel taxonomic categories" (p. 53).

The difficulty found by teachers to differentiate categories in Bloom's taxonomy may be because it is too general and there is no clear example of its application. Although in 1977, Hannah and Michaelis (as cited in Moseley et al., 2015) provided a list of verbs for each category, the verbs can have various interpretation. Besides this, there are some similar verbs in different categories. For example, the verb

‘compare’ can be found in the categories of analysis and evaluation, ‘conclude’ in synthesis & evaluation and ‘summarise’ in synthesis and evaluation. There is no explanation how ‘compare’ is applied in the process of analysis and/or evaluation. Similarly, there is no example how ‘conclude’ in synthesis can be different from ‘conclude’ in the evaluation stage.

Another criticism of the verbs attached to each category is that some verbs may not promote critical thinking. The verbs ‘tell’ and ‘write’ under the category of synthesis may not really promote critical thinking if students are only asked to tell and write about their personal information, for example in the context of ELT. Similarly, the verb ‘imagine’ falling into the category of synthesis might not encourage students’ critical thinking skills. Because it generates various interpretation, Bloom’s taxonomy and the verbs attached to each category requires clear examples of implementation.

Freeman (2014) conducted a study to investigate the types of questions and tasks of EFL textbooks’ reading texts. In her study, she used Bloom’s, Sanders’, Barret’s, Nuttal’s, and Day and Park’s taxonomies, some of which, according to her, were not targeted at reading in a second or foreign language. Sanders’ taxonomy, according to Freeman (2014), is the results of an interpretation of Bloom’s taxonomy, and Bloom’s and Sanders’ taxonomies inspired Barret’s taxonomy. While Nuttal’s taxonomy imitates that of Barret, Day and Park’s taxonomy “closely resembles Nuttal’s” (Freeman, 2014, p. 76). This shows that Bloom’s taxonomy is the basis of various taxonomies and can be interpreted in various perspectives, as mentioned above.

After trialling the taxonomies using the *Headway Intermediate* textbok, Freeman (2014) found that “no single taxonomy proved to be wholly suitable and superior to its counterparts” (p. 77) and “no single existing taxonomy covered all the different types of questions found even in a small sample” (p. 79). She therefore created a new taxonomy by selecting elements from those taxonomies.

Freeman’s taxonomy consists of three categories: content questions, language questions and affect questions. Content questions consist of three comprehension

question types: textually explicit, textually implicit and inferential comprehension. Language questions also consist of three comprehension question types: reorganization, lexical and form. Affect questions comprise two comprehension question types: personal responses and evaluation.

As mentioned, Freeman's taxonomy is the result of selecting elements of Bloom's, Sanders', Barret's, Nuttal's, and Day and Park's taxonomies. Each taxonomy, according to Freeman, is the result of interpretation and adaptation of the previous one with Bloom's taxonomy acting as the starting point. It can be concluded that Freeman's taxonomy is also the result of interpretation and adaptation of Bloom's taxonomy. It is therefore proposed here to combine both Bloom's and Freeman's taxonomies and to examine them to find their key ideas. As has been mentioned, their key ideas support the critical thinking ideas proposed by Dewey, Brookfield, Paul and Benesch in which critical thinking improves learning, encourages independence, promotes tolerance, sustains democracy and can be used as a tool to respond to a globally changing world.

The first level of Bloom's taxonomy, knowledge, only requires students to recall and remember information. This does not encourage students' critical thinking skills. In the same manner, the first comprehension question type, textually explicit, of Freeman's taxonomy does not promote critical thinking because "in this question type the answer to the question can be found stated directly in the text" (Freeman, 2014, p. 83).

Textually implicit, which is the second comprehension question type of Freeman's taxonomy, is likely to show the possibility of promoting critical thinking as, according to Freeman (2014), "in this question type the answer to the question is stated directly in the text but is not expressed in the same language as the question" (p. 83). However, the example of this question type is not provided. The third type of Freeman's first category, inferential comprehension, is clear enough though there are also no examples provided. She states that this type of question asks students "to combine their background knowledge with the information in the text and make necessary connections" (p. 83). This activity may require students to present their opinion, *viewpoint* or *perspective*. This seems similar to the second category of

Bloom's taxonomy, comprehension, in which students are asked to understand the problems, state the problems using their own words and establish relationships between dates, principles, generalizations or values. The activities, to a certain degree, require students to *summarise* and present their *viewpoint*. Sample example verbs such as 'predict' and 'give example' attached to the comprehension category proposed by Hannah and Michaelis can support the activities. Giving an example is necessary when students need to *clarify* their viewpoint in, for example, stating the problems using their own words, as suggested in Bloom's taxonomy.

Language questions, the second category of Freeman's taxonomy, comprise three comprehension question types: reorganization, lexical and form. Freeman states that reorganization requires students to reorder information by putting sequences in chronological order or to transfer information by transferring data into label, picture or table. Transferring data into a table cannot promote students' critical thinking if, for example, students are only asked to rewrite explicit information from the text to the table. This activity is found in an Indonesia ELT textbook in which students are asked to read a short paragraph containing the characteristics of an artist and move the information to the table provided (*Interlanguage* - grade X, unit 7 task 12 pages 120-122).

The second and third question types, lexical and form, seem to be able to encourage critical thinking. Lexical question types, for example, ask students to guess the meaning of a word or phrase from the context. To a certain degree, this requires them to make an *assumption*. On the other hand, form questions ask students "to focus specifically on grammar and form, not information" (Freeman, 2014, p. 83). The example of activity proposed by Freeman is asking students to explain the use of one tense rather than another. This activity requires students to give *reasons* to support their opinion or *viewpoint*.

Affect questions, the last category of Freeman's taxonomy, consist of two comprehension question types: personal response and evaluation. This category can be associated with the last category of Bloom's taxonomy, which is also named 'evaluation.' The examination of Bloom's and Freeman's taxonomies shows that

this category may promote critical thinking. In terms of personal response, Freeman (2014) states that:

This question type requires the reader to offer their personal reaction to the text in terms of likes/dislikes, what they found funny, surprising etc. The reader can be asked to transfer the situation in the text to their own cultural context and comment. Highly subjective, there is no ‘right’ answer. (p.84)

Freeman’s explanation clearly support students to *agree* or *disagree* with the text. This, however, needs reasons and evidence to support their agreement (like) or disagreement (dislike). As the answer is subjective, students also need reasons to support their viewpoints.

Similar to personal response questions, evaluation questions also require students to provide *reasons* and *evidence* as, according to Freeman, this question type asks “the reader to make judgment...the reader is also expected to provide a rationale or justification for their view” (p. 84).

The examination of Bloom’s and Freeman’s taxonomies generate key ideas which have the potential to promote learners’ critical thinking skills, more specifically the ‘third strand’ of critical thinking. The italicized words above are their key ideas: viewpoint/perspective, agreement/disagreement, summary, prediction, clarification, assumption and reason/evidence (See Table 3.1). These key ideas are then connected to those of critical thinking strategies, programmes and tests to be used in this research.

Table 3.1 Key ideas of Bloom’s and Freeman’s taxonomies having the potential to promote critical thinking

Table 3.1

Agreement
Assumption
Clarification

Disagreement
Evidence
Perspective
Prediction
Reason
Summary
Viewpoint

3.3.2 Critical thinking strategies

Similar to critical thinking taxonomies above, critical thinking strategies reviewed and examined below are in agreement with the position establishing the ‘third strand’ of critical thinking as the appropriate theoretical basis for this research. This subsection is divided into two parts: a review of empirical studies containing critical thinking strategies (i) and an examination of the key ideas of critical thinking strategies (ii).

i. A review of empirical studies containing critical thinking strategies

This part aims to generate the key ideas of critical thinking strategies, which are obtained by reviewing and examining six empirical studies on infusing critical thinking into ELT. The term ELT here includes ESL, EFL & TESOL and refers to the teaching of English to Asian (non-Western) students.

The six empirical studies reviewed (Dantas-Whitney, 2002; Daud & Husin, 2004; Davidson & Dunham, 1997; Park, 2011; Shahini & Riazi, 2011; Yang & Gamble, 2013) were conducted in countries with similar cultures, religions and histories to that of Indonesia. Studies were conducted in Iran, Taiwan, South Korea, Japan and Malaysia, as well as one conducted in the USA with the participants coming from mostly Asian countries: Japan, Thailand, Taiwan, South Korea, Kuwait, Indonesia

and Mongolia (Dantas-Whitney, 2002). The strategies of each study are presented and examined to generate key ideas.

The rationale behind selecting the abovementioned studies is multifarious. First of all, the number of empirical studies offering critical thinking strategies in an ELT context is not many, and the literature search found less than ten empirical studies. The six studies mentioned above were selected because they were published in prominent journals such as *System*, *British Journal of Educational Technology*, *TESOL Journal* and *ELT journal*. Second, the studies presented sound methods with their findings showing that the teaching strategies adopted could encourage students' critical thinking. Thus, their arguments that non-Western (Asian) students' critical thinking skills can be improved by applying the strategies and that critical thinking can be infused in EFL can be accepted. Finally, the studies support the strand of critical thinking in the Western democratic tradition forming the theoretical basis for this work. The strategies proposed by the studies may encourage students to see things from various perspectives, hence helping them to avoid monological thinking, which can be a serious threat to a pluralist Indonesia and to democracy.

The study by Dantas-Whitney (2002) infused critical reflection - a term which is closely associated with critical thinking - into an ESL classroom at a large university in the USA. Reflective audiotaped journals were used as a tool for critical reflection, and two questions were posed: (1) How do students use audiotaped journals to integrate personal perspectives into the consideration of course content? and (2) How do students perceive audiotaped journals as a tool for language learning?

Dantas-Whitney's (2002) analysis produced three themes (relevance, critical thinking, multiple identities) in regard to the first research question and one theme related to the second research question, namely that "students perceived the audiotaped journals as valuable opportunities for oral language practice, non-threatening corrective feedback and self-evaluation" (p. 548). Regarding the 'critical thinking' theme, Dantas-Whitney showed three excerpts reflecting students' critical thinking responses. One participant expressed his critical thought

addressing drugs while another participant criticised the influence of mass media on women's self-image. Unfortunately, Dantas-Whitney did not provide the number of audiotaped journals showing the participants' engagement in critical and reflective thinking. She states, "the audiotaped journals in this study encourage *many* of the students to engage in critical and reflective thinking" (p. 549). However, the excerpts showing critical and reflective thinking that were provided in the article show that critical thinking can be promoted in the EFL classroom by using an audiotaped journal. The following table is the audiotaped journal assignment used in the study to provoke critical reflection.

Table 3.2 Dantas-Whitney's audiotaped journal assignment

Table 3.2

<p>Audio Journals</p> <p>After each unit, you will prepare a five to ten minute audio journal to discuss what you have learned about the unit's topic. You will record your voice on an audio cassette using an informal and conversational style. TRY NOT TO READ FROM A PREPARED SCRIPT!</p> <p>Your audio journal should have two parts.</p> <p>1. Summarize the information you have learned about the topic.</p> <ul style="list-style-type: none"> ● from your textbook and the radio interview ● from your classmates' presentations and discussions ● from videos ● from outside speakers <p>* Don't try to talk about <u>all</u> the information you learned from the source above. Present a general overview, and then choose one of the topics for you to focus on.</p> <p>2. Discuss your personal perspectives on the topic. You can do this in many different ways. Below are a few ideas.</p> <ul style="list-style-type: none"> ● Discuss your opinions about the topic. ● Relate the information to a personal experience, or the experience of someone you know.
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- Compare what you have learned to the situation in your country.
- Talk about how this information can help you in your future.
- Mention other related areas that interest you.

Source: Dantas-Whitney (2002)

Daud and Husin (2004) investigated the use of a literary text combined with concordancer to develop ESL students' critical thinking abilities at the International Islamic University Malaysia. A concordancer is defined as "a piece of software, either installed on a computer or accessed through a website, which can be used to search, access and analyse language from a corpus" (British Council - BBC). The study used *Othello*, which was chosen, according to Daud and Husin (2004), as it introduced multiculturalism and human relations.

The study, which adopted a quasi-experimental design, hypothesised that the two groups would show improvement in critical thinking skills since the researchers believed that literary texts could promote these skills. While the participants in the experimental group (n = 21) were allowed to use the computer concordance to analyse *Othello*, the control group (n = 19) was given traditional instruction in which the blackboard, students' notes and textbooks were used. Through classroom observation, they report that the lesson sparked a lively discussion in the two groups. The statistical results, based on *The Cornell Critical Thinking Test*, showed that even though there was a difference between the experimental and control groups in terms of their critical thinking abilities, in general both groups showed improvement. They conclude, "the use of concordance was found to enhance students' ability to think critically" (p. 485).

However, as the control group also improved, it can be argued that the biggest contributing factor to students' critical thinking development may not be the concordancer, but the lesson plan which encourages students to explore and scrutinise the text (See Table 3.3). The study shows that ELT, along with literature, can be used as a vehicle to teach critical thinking, and non-Western students' critical thinking skills may be enhanced.

Table 3.3 Daud and Husin's descriptions of lessons

Table 3.3

Topic	Word(s)	Tasks	Hours spent
Introduction to <i>Othello</i>	Love	Describe the different representation and meaning of 'love' in different contexts.	2
Focus on: Othello Is Othello a cold-blooded murderer?	Moor, Black, Strong, Handkerchief	Analyse the words based on occurrences, meanings in different contexts, the identity of the character using them, the person they refer to and the reason for using them. Based on the words, justify whether Othello is a cold-blooded murderer.	2
Focus on: Iago Is Iago's motive justified?	Honest / Honesty, Revenge, Hate	Analyse the words based on occurrences, meanings in different contexts, the identity of character using them, the person they refer to and the reason for using them. Based on the words, reflect critically whether Iago's motive is justified.	2

Focus on: Desdemona Does Desdemona's unassertiveness lead to her death?	Fair, False, Whore, Strumpet	Analyse the words based on occurrences, meanings in different contexts, the identity of the character using them, the person they refer to and the reason for using them. Based on the analysis of the words, decide whether Desdemona's unassertiveness led to her death.	2
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Source: Daud and Husin (2004)

Davidson and Dunham (1997) also used critical thinking in a content-based EFL programme in Japan in a study in which they posed two research questions: (1) On a critical thinking task, will English learners exposed to critical thinking skills-training do significantly better than similar students who have not received such training? and (2) Can a critical thinking test designed for native English speakers be used as an instrument for evaluating critical thinking skills among non-native English learners? *The Ennis-Weir Critical Thinking Essay Test* (EWCTET) was used to measure Japanese students' progress in critical thinking after experiencing intensive academic English instruction for one year. While the control group (n=19) received only content-based intensive instruction, the treatment group (n=17) was given additional training in critical thinking based on Norris and Ennis's list of critical thinking skills. The result showed that the treatment group (mean score = 6.6) outperformed the control group (mean score = 0.6) on EWCTET. Concerning the second research question and the teaching of critical thinking in ELT class, they state that:

The Ennis-Weir test, designed for native English speakers, appears to be usable for non-native English learners. Furthermore, it is encouraging to find that even a small amount of instruction in the basics of critical thinking appeared to result in higher scores for the treatment group.

Critical thinking skills can apparently be taught to some extent along with English as a foreign language and can, therefore, enhance a content-based course of study. (p. 53)

Norris and Ennis's list of critical thinking activities that inspired Davidson and Dunham's instructional treatment is detailed in the table below:

Table 3.4 Norris and Ennis' list of critical thinking skills

Table 3.4

Elementary clarification:
1. Focusing on question
2. Analysing arguments
3. Asking and answering questions that clarify and challenge
Basic support:
4. Judging the credibility of a source
5. Making and judging observations
Inference:
6. Making and judging deductions
7. Making and judging inductions
8. Making and judging value judgements
Advanced clarification:
9. Defining terms and judging definitions
10. Identifying assumptions
Strategies and tactics:
11. Deciding on an action
12. Interacting with others

Source: Davidson and Dunham (1997, p. 45)

A study by Park (2011) explored critical reading using news articles. The three questions posed in the study were (1) What are the instructional steps taken in this EFL critical literacy reading classroom? (2) How do these L2 students engage in critical thinking through the processes of interaction and writing about the article? and (3) What are the benefits and challenges of building a critical literacy curriculum in an EFL classroom setting?

The study was conducted in a university classroom in South Korea. There were 38 participants who were all students majoring in English education. The critical literacy lesson was given and audio-recorded, and was included in a reading course which integrated speaking, listening and writing. After reading the texts, the students participated in discussion about the issue of social equality, wrote a response paper “to encourage critical thinking as well as measure students’ achievement in the class” (Park, 2011, p. 29) and presented an article of their choice. The texts given to the students were all taken from *The New Yorker* and contained critical incidents. Vasquez (as cited in Park, 2011) argues “critical incidents are issues that help students and the teacher think about a particular issue in a different way” (p. 30). Park selected seven critical incidents in the articles, which included, among other things, war in Syria, family relationships, the truth about presidential speeches, the use of neuroenhancing drugs and evaluating teachers.

The course began with pre-reading activities dealing with linguistic misconceptions to help understand what the articles were about. Relevant terms and expressions were also discussed. Post reading activities involved discussions about critical issues expressed in the articles, which were guided by discussion questions prepared by the discussion leaders and teacher beforehand. The guide was intended to help develop the students’ critical perspective. The discussion questions covered ‘compare and contrast opinions’ and ‘determine propaganda and bias.’ ‘Compare and contrast’ also included comparing and contrasting cultural and social events in the South Korean context (See Table 3.5). Based on the findings of the study, Park (2011) reported that “the reaction papers collected at the end of the class revealed students’ increasing command of the use of key terms to support their arguments.

They were able to manipulate the language used in the text to meet their own agenda” (p. 42). She also states that reaction papers were supported by the results of the interviews, which were conducted in Korean. Based on the classroom proceedings and interviews, Park (2011) suggested advantages of teaching ESL critical literacy including that critical literacy can help students become independent readers, it can help integrate reading, speaking, listening and writing in an EFL classroom, and it can help improve students’ interest and motivation through their involvement in critical issues.

Similar to the previous study, Park did not include criteria for how she determined the critical performance of students’ reaction papers. The four out of 38 students mentioned may not be representative for the interview results, and excerpts of the interviews were not provided. However, some excerpts of students’ reaction papers show that critical perspectives were demonstrated such as providing reflection and opinion. This shows that teaching critical literacy using news articles may promote critical thinking and be successful in the ESL/EFL context.

Table 3.5 Park’s critical engagement strategies

Table 3.5

<p>Pre-reading stage:</p> <p>Discussing terms and expressions used in the article.</p> <p>Post-reading stage:</p> <p>Compare and contrast opinion.</p> <p>Determine the reliability of data source supported by cultural and personal experience.</p> <p>Determine text’ propaganda and bias.</p> <p>Determine the decision authors make.</p>

Source: Park (2011)

Shahini and Riazi (2011) carried out a study on Philosophy-Based Language Teaching (PBLT) in an EFL classroom in Iran to assess the development of students’ speaking, writing and thinking skills. They were motivated by literature

showing that PBLT could enhance students' communication skills and thinking abilities in the L1 setting. They define PBLT as aiming "to encourage students to plunge deeper into a question or set of questions by discussing their understanding of the concepts and reasoning for such an understanding" (p. 171). In the study, they hypothesized that PBLT would encourage EFL students' speaking, writing and thinking skills.

The participants were university students in Iran majoring in engineering, sciences and humanities with the same English proficiency levels. The PBLT approaches were introduced to the experimental group, while the control group was exposed to ordinary or non-philosophical questions. There were 17 class sessions that lasted for two hours each and were taught by the same teacher, and students were given a different text in each session. Pre and post-tests in speaking and writing were assigned. The results of the speaking test were rated using the *Speaking scale: analytic descriptors of spoken language* from the Common European Framework, and the instrument for the writing test was the *ESL composition profile scale* by Jacobs, Zinkgraft, Wormuth, Hartfiel, & Hugher (1981). The statistical data showed that there was significant difference between the experimental and control groups in speaking (mean difference = 5.35) and writing (mean difference = 9.82).

The PBLT approaches introduced to the experimental group were actually open-ended questions asking alternative views, clarification and reasons. Shahini and Riazi (2011) provide PBLT strategies they believe could promote critical thinking, as shown in the table below:

Table 3.6 Shahini and Riazi's PBLT strategies

Table 3.6

For 'clarity': Do you mean that ...? By ... do you mean ... or ... or maybe something else? When you say ..., are you supposing/assuming that ...? For 'exploring disagreement':
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Why do you think you are right?
What makes you think she is wrong?
Can you justify your answer?
Can you think of a better reason?
For 'considering alternatives':
Does anyone have a different idea?
How else could we look at this?
For 'appealing to criteria':
According to what criteria do you say that?
For 'making appropriate distinctions':
Is this case basically the same as that?
For 'jumping to a conclusion':
Can we be certain that just because of so-and-so, it must be the case that such-and-such?

Source: Shahini & Riazi (2011)

One of the limitations in this research, as admitted by the researchers themselves, is that students' critical thinking skills were not tested, the criteria for examining students' speaking and writing were not elaborated upon nor were the two testing instruments explained. However, through observation, Shahini and Riazi (2011) reported that the students in the experimental group "were much more motivated to actively participate in discussions" (p. 175). When interviewed, students in the experimental groups mentioned several points regarding their active participation in the discussions. Shahini and Riazi (2011) state that:

The questions were able to provoke students' thought, promote reflective and critical stance and require them to be able to explain concepts; the discussions encouraged students to be tolerant and to respect different ideas; when being involved with critical dialogues, the students were unaware that they were communicating in English and able to produce language despite mixing with native language sometimes;

and students were unaware of the time due to interesting discussions” (p. 175-176).

All in all, the study investigating the PBLT approach to promote speaking, writing and thinking skills may not be convincing in showing that it may improve students’ critical thinking as there was no critical thinking test used. However, it is successful in demonstrating that PBLT may be a potential tool to promote students’ critical thinking skills in an ELT context as it helps students to respect viewpoints, explain concepts, apply reflective thinking and be critical on an issue.

Yang and Gamble (2013) carried out an experiment by designing a course for critical thinking-integrated EFL instruction at a university in Taiwan. The study intended to find out whether the course they designed helped the experimental group to perform better than the control group in terms of English proficiency, critical thinking and academic achievement. Three questions were posed: (1) Will the experimental group (critical thinking-enhanced EFL instruction) demonstrate greater improvement in English reading and listening proficiency over the course of the intervention than the control group (non-critical thinking-enhanced EFL instruction)? (2) Will the experimental group demonstrate higher levels of critical thinking than the control group, as evidenced by a sample of their writing following the intervention? and (3) Will the experimental group demonstrate higher levels of academic achievement than the control group, as measured by a content-based examination following the intervention?

The study reported that students in the experimental group (n=31) were guided in critical thinking activities such as information literacy and critical reading (reading), critical reflection/sharing, article critique/peer feedback, debate (listening/speaking), argumentative writing and peer critique with an emphasis on critical thinking skills (writing) (See Table 3.7). The control group (n=37) was taught effective language learning by following the textbook without emphasizing critical thinking activities. The study used three testing instruments: the *English proficiency test* for English proficiency, the *Holistic Critical Thinking Scoring Rubric (HCTSR)* from Facione and Facione (1994) for critical thinking and a *content-based achievement test* for academic achievement which “was designed

based on course content covered during the semester and evaluation items provided by the textbook publisher” (Yang & Gamble, 2013, p. 404). To check students’ critical thinking skills, the students wrote an essay about global warming which was analysed using the HCTSR. The achievement test consisted of closed questions, true/false questions, vocabulary matching, and comprehension questions.

Quantitative data revealed that the experimental group significantly outperformed the control group both in overall English proficiency and in critical thinking skills. In terms of their academic achievement, the textbook-based final test also showed that the experimental group outperformed the control group. Based on the results of a Likert-style questionnaire, Yang and Gamble (2013) reported three points: (1) 96 percent of participants in the experimental group expressed their satisfaction with their English class that semester, (2) 78 percent of participants agreed that learning critical thinking in college was important, and (3) half of the participants mentioned that their favourite activity was debate.

Table 3.7 Yang and Gamble’s instructional procedure for the experimental group

Table 3.7

<p>Warm up activity: Students work in small groups and match information-rich sentences to questions according to their relevance. Focus on critical thinking skills: Identification of “information need”</p> <p>Direct instruction: The elements of an information literacy rubric were introduced, modelled, and discussed collaboratively. Focus on critical thinking skills: Recognizing bias, use of supporting data, and diversity of opinion.</p> <p>Group practice: Based on the examples provided during direct instruction, students were invited to perform their own evaluations of an authentic writing using a researcher-designed “critical reading rubric.” Focus on critical thinking skills: Critical analysis of information sources.</p> <p>Independent application: Students demonstrate information literacy by using the critical reading rubric to individually evaluate factors such as author’s bias from three different sources found by</p>
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independent research. **Focus on critical thinking skills:** Evaluate claim and evidence from three authentic, self-selected articles.

Source: Yang and Gamble (2013)

ii. An examination of the key ideas of critical thinking strategies

The abovementioned empirical studies dealing with infusing critical thinking into ELT is now followed by an examination of each study's critical thinking strategies, with a view to obtaining key ideas from them. First of all, Dantas-Whitney's audiotaped journal assignment consisted of five main points. Examining the points, there are several key ideas that emerge such as summary (summarise information), reflection (relate the information to a personal experience, or the experience of someone you know), perspective (compare what you have learned to the situation in your country), prediction (talking about how this information can help you in the future), and viewpoint (other related areas that interest you). In short, the key ideas of Dantas-Whitney's critical thinking strategies are *summary, reflection, perspective, prediction* and *viewpoint*.

The key ideas of Dantas-Whitey's critical thinking strategies are in line with the taxonomies reviewed above. Summary, for example, is also found in the list of verbs of Bloom's taxonomy, namely comprehension, synthesis and evaluation categories. As has been mentioned, a criticism of Bloom's taxonomy and its list of verbs for each category is that it does not provide explicit examples, so many teachers are confused how to use 'summary' for comprehension, synthesis and evaluation. On the other hand, summary in Dantas-Whitney critical thinking strategies is very clear in that it asks students to summarise the information they have learned about the topic (from textbooks, radio interviews, classmates' presentations and discussions, videos and outside speakers). It can be inferred that Dantas-Whitney's critical thinking strategies clarify the taxonomies. With regard to viewpoint or perspective, Dantas-Whitney critical thinking strategies explicitly ask students to discuss their perspective on the topic by discussing their opinion, relating the information to a personal experience, comparing what they have learned

and mentioning other related areas. This is similar to Freeman's taxonomy, inferential comprehension, which asks students "to combine their background knowledge with the information in the text" (Freeman, 2014, p. 83).

An examination of Daud and Husin's descriptions of lessons conveys four key ideas. When seeing an assignment such as 'Describe the different representation and meaning of 'love' in different contexts,' it may be inferred that the prompt asks the student to clarify meaning in various perspectives. The statement 'Analyse the words based on occurrences, meanings in different contexts, the identity of the character using them, the person they refer to and the reason for using them' also gives an idea of perspective and reason. Reason and perspective also appear in the statement 'Analyse the words based on occurrence, meanings in different contexts, the identity of character using them, the person they refer to and the reason for using them.' Evidence can be found in the statement 'Based on the words, justify whether Othello is a cold-blooded murderer.' Therefore, the key ideas in the critical thinking strategies used by Daud and Husin are *clarity*, *perspective*, *reason* and *evidence*.

Examining Norris and Ennis's list of critical thinking skills as adopted by Davidson and Dunham conveys key ideas such as *clarity*, *evidence* and *assumption*. Clarity comes from 'Elementary clarification, e.g. asking and answering questions that clarify and challenge.' Evidence is from 'Basic support such as making and judging observations,' and 'Inference, for example, making and judging deductions/ inductions.' And, 'Advanced clarification, e.g. identifying assumptions' gives an idea of clarity and assumption.

The examination of Park's critical engagement strategies, especially the post-reading stage, shows emerging key ideas such as *viewpoint* (compare and contrast opinion), *reason* (determine the reliability of data source supported by cultural and personal experience), and *evidence* (determine text' propaganda and bias; determining the decision authors make).

Shahini and Riazi's PBLT strategies clearly show key ideas which include *clarity* (questions for clarity), *disagreement* (questions for exploring disagreement),

alternative (questions for considering alternatives), *viewpoint* (e.g. According to what criteria do you say that? Is this case basically the same as that?), and *conclusion* (questions for jumping to a conclusion).

The examination of Yang and Gamble’s instructional procedures for the experimental group centres only on ‘Focus on critical thinking’ parts, which show several key ideas. For example, ‘Identification of “information need”’ may refer to prediction. Evidence, viewpoint and perspective can be derived from the statements ‘Recognizing bias, use of supporting data, and diversity of opinion,’ ‘Critical analysis of information sources,’ and ‘Evaluate claim and evidence from three authentic, self-selected articles.’ Therefore, the key ideas obtained from Yang and Gamble’s strategies are *prediction*, *evidence*, *viewpoint* and *perspective*.

The key ideas of critical thinking strategies above clarify, or even complement the taxonomies, especially Bloom’s taxonomy, which lacks explicit application. As mentioned, Dantas-Whitney’s summary can be used as an example of what a teacher can do in dealing with the categories of Bloom’s taxonomy. Other strategies such as prediction, reason and evidence fit the taxonomies. While prediction is listed in the list of verbs of Bloom’s taxonomy, reason and evidence are in agreement with Freeman’s taxonomy, personal response category, in which the students are required to provide a rationale and justification for their view, as has been mentioned above.

The summary of key ideas of these six critical thinking strategies which may promote students’ critical thinking skills and which have been used by researchers in an ELT context are listed in the following table:

Table 3.8 The key ideas of teaching strategies promoting students’ critical thinking skills.

Table 3.8

Alternative
Assumption
Clarity

Conclusion
Disagreement
Evidence
Perspective
Prediction
Reason
Reflection
Summary
Viewpoint

3.3.3 Critical thinking programmes

The critical thinking programmes below are reviewed in order to assess their potential contribution to the established theoretical position constituted by the ‘third strand’ of critical thinking. They give many perspectives on encouraging students’ critical thinking, thus avoiding monological thinking which, according to Paul, can result in weak-sense critical thinkers. As mentioned, weak-sense critical thinking is what a pluralist Indonesia needs to avoid, as it only sees a thing from only one viewpoint, and weak-sense critical thinkers think for their own interest (Paul, 1990).

This section therefore attempts to generate the key ideas of critical thinking programmes as proposed by critical thinking scholars and authorities working in the ‘Western’ democratic tradition. The programmes are reviewed, and their approaches to promoting critical thinking skills are examined. The key ideas uncovered as a result of this examination are presented at the end of the section.

The existing literature proposes several critical thinking programmes that were designed by relevant scholars and authorities. They include: Philosophy for Children (P4C), Taxonomy of Socratic Questions (TSQ), Cognitive Acceleration (CA), Feuerstein’s Instrumental Enrichment (FIE), Top Ten Thinking Tactics (TTTT), De Bono’s CoRT programme (CoRT), Swartz and Park’s Thinking Skills Taxonomy (SPTST), Six Thinking Hats (STH) and Fisher’s Story-Based Activities

(FSBA). Studies adopting those critical thinking programmes have been conducted, and many authors (e.g. Aubrey, Ghent, & Kanira, 2012; Green, 2009; Jenkins & Lyle, 2010; Lam, 2012; Mills-Bayne, 2009; Reznitskaya, Glina, Carolan, Michaud, Rogers, & Sequeira, 2012; Stanley, 2007; Thwaites, 2005; Trickey & Topping, 2004; Vansielegem, 2006) are the proponents of P4C and CA in promoting pupils' critical thinking skills.

Matthew Lipman created P4C due to his concern for college students' low level of thinking skills in his philosophy class (Glevey, 2006). P4C consists of eight novels designed for children aged 3-16 years old. Fisher (2008) reports that the teacher's manual consists of discussion plans consisting of "questions around a central concept or problem" (p. 23). Fisher also goes on to say that the series of questions follow Socratic questions. As it is claimed that P4C adopts Socratic questions, the questions need reviewing.

One of the critical thinking authorities to have interpreted Socratic questions is Richard Paul. As mentioned, Paul's thoughts belong to the 'third strand' of critical thinking, adopted for this study. Paul (1990) argues "Socratic questions, wherein students' thought is elicited and probed, allows students to develop and evaluate their thinking by making it explicit" (p. 269). The following table lists the Taxonomy of Socratic Questions (TSQ) as based on Paul's interpretation.

Table 3.9 Taxonomy of Socratic Questions (TSQ)

Table 3.9

<p>Questions of clarification (e.g. what do you mean by...? What is your main point?)</p> <p>Questions that probe assumptions (e.g. What are you assuming? What do you think the assumption holds here?)</p> <p>Questions that probe reasons and evidence (e.g. Do you have any evidence for that? Why do you think that is true? How do you know?)</p> <p>Questions about viewpoints or perspectives (e.g. What might someone who believed ...think? Can/did anyone see this another way?)</p>

Question that probe implications and consequences (e.g. what are you implying by that?)

Questions about question (e.g. Is this question easy or hard to answer? Why?)

Source: Paul (1999, p. 276-277)

TSQ clearly shows six key ideas of asking critical thinking questions and consists of questions asking for *clarification, assumptions, evidence, viewpoints or perspectives, implications & consequences* and *question*. The examples of questions are also provided. Other critical thinking strategies reviewed and examined below are in line with TSQ.

Moving on to CA, this is “a method for the development of students' general thinking ability (or general intelligence) which has been developed at King’s in a series of research and development programmes continuing from 1981 to the present” (King’s College London). Three programmes for school children have been developed: CASE (Cognitive Acceleration through Science Education), CAME (Cognitive Acceleration through Mathematics Education) and Cognitive Acceleration through the Arts. The table below lists some of the activities taken from an extract of the Arts project.

Table 3.10 Cognitive acceleration through the Arts

Table 3.10

Creating an atmosphere for questioning:

Setting the thinking agenda:

What do you think?

Do you have a reason?

Is there another way?

What do you think happens next?

Developing responses:

What reasons do you have for saying that?

Why do you disagree/agree?

What do you mean by that?

Are there any alternatives?

Questions to encourage clarification of thought and encourage pupils to make connections and distinctions:

Are you saying that...?

So from your point of view...am I correct in assuming that you think...?

Questions to help consolidate thoughts and construct hypotheses:

Can you sum up your arguments/ideas/views?

What do you think will happen as a result?

What do you predict will happen next?

Questions to focus discussion and consolidate views:

The implications of what you have said are...

Could your meaning/idea be taken in this way...?

Source: McGregor (2007, p. 74)

The first part of CA, setting the thinking agenda, consists of questions that convey the ideas of the questioning viewpoint (what do you think?), reason (do you have a reason?), perspective (is there another way?) and prediction (what do you think happens next?). The second part, developing responses, poses some questions regarding reason (what reasons do you have for saying that?), agreement and disagreement (why do you disagree/agree?), clarification (what do you mean by that?) and alternative (are there any alternatives?). The third part consists of questions asking for clarity (are you saying that...?), assumption (so far your point of view...am I correct in assuming that you think...?), summary (can you sum up your arguments/ideas/views?), prediction (what do you predict will happen next?), and implication (the implications of what you have said are...). Therefore, the key ideas that emerge from CA are *viewpoint, reason, perspective, prediction, agreement, disagreement, clarity, alternative, assumption, summary* and *implication*. These key ideas support Paul's TSQ.

Another critical thinking programme which is in line with TSQ is Feuerstein’s Instrumental Enrichment (FIE). The FIE critical thinking programme, according to its creator Feuerstein (as cited in Glevey, 2006), aims to “change the overall cognitive structure of the retarded performer by transforming his passive and dependent cognitive style into that characteristic of an autonomous and independent thinker” (p. 75). The characteristics of a performance improved by adopting specific kinds of thinking skills are presented in the following table:

Table 3.11 Feuerstein’s Instrumental Enrichment

Table 3.11

Thinking skill	Improved performance
1. The ability to find relationship between objects and events.	1. Search for and deduce relationship; confidence in drawing accurate conclusions.
2. The ability to organise data into categories.	2. Can project relationships among broader, complex concepts.
3. The ability to compare and contrast.	3. Can organize and integrate bits of information into meaningful system.
4. The ability to perceive data and events accurately.	4. Can form internal frame of reference needed to structure life experience.
5. The ability to differentiate and integrate.	5. Uses cognitive strategies for differentiation and integration.
6. The ability to resist an impulsive approach to tasks.	6. Stop to think before acting; explores alternatives; assesses consequences.
7. The ability to remain motivated to complete difficult tasks.	7. Exhibit intrinsic motivation to complete; joy in work.
8. The ability to perceive and understand principles and formulae expressed in numerical patterns.	8. Can draw accurate conclusions from events or data.
9. The ability to recognise spontaneously problems and project cause and effect relationship.	9. Sees problem situations and takes initiative to solve; understand cause and effect.

10. The ability to use language with precision to encode and decode instructions.	10. Seeks clarification of instructions; understand implicit instructions.
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Source: McGregor (2007, p. 102)

The examination of FIE focuses on the ‘improved performance’ column, as the ten activities listed in the column are actually what the critical thinking processes in the other column expect. The activities deal with making conclusion (confidence in drawing accurate conclusions; can draw accurate conclusions from events or data), promoting perspective (can project relationship among broader, complex concepts; sees problem situations and takes initiative to solve; understand cause and effect.), exploring alternative and judging consequence (stop to think before acting; explores alternatives; assesses consequences), seeking clarification and understanding implication (can organize and integrate bits of information into meaningful system; seeks clarification of instructions; understand implicit instructions). It is therefore inferred that the key ideas of FIE are *conclusion, perspective, alternative, consequence, clarification and implication.*

TTTT (Top Ten Thinking Tactics), according to McGregor (2007), aims “to help students become more effective learners” (p. 111). In line with its name, this programme proposes ten tactics that are believed to be able to engage students in critical thinking activities. The following table lists the extracts of the programme.

Table 3.12 Top Ten Thinking Tactics

Table 3.12

<ol style="list-style-type: none"> 1. Pinpointing the problem - clarifying what the problem is. 2. Systematic search - going beyond scanning of material, continuing to look at the data. 3. Planning - paying selective attention to relevant information. 4. Check and change - trying new ideas when solution is not working. 5. Correct communication - making your instructions as clear as possible.

6. Comparing and contrasting - seeing similarities and differences.
7. Getting the point - shifting confusing information for relevant and irrelevant material.
8. Using several sources - thinking about more than one piece of information.
9. Self-awareness - being aware of own style, strength and weaknesses.
10. Setting your own target - understanding your purpose, wishes and the goals other have for you.

Sources: McGregor (2007, p. 112-113)

Examining the ten activities listed in TTTT generates the key ideas. For example, the first and fifth tactics (pinpointing the problem - clarifying what the problem is; correct communication - making your instructions as clear as possible) indicate clarification. Other tactics mostly refer to perspective (systematic search - going beyond scanning of material, continuing to look at the data; planning - paying selective attention to relevant information; check and change - trying new ideas when solution is not working; comparing and contrasting - seeing similarities and differences; getting the point - shifting confusing information for relevant and irrelevant material; using several sources - thinking about more than one piece of information). It is concluded that the two key ideas found in TTTT are *clarification* and *perspective*. These two key ideas are also contained in Paul's TSQ.

CoRT stands for Cognitive Research Trust. This critical thinking programme was created for younger high schools students (McGregor, 2007) with six themes as presented in the table below.

Table 3.13 Six themes of CoRT programme

Table 3.13

CoRT 1: Breath - Theme: To broaden perception.

CoRT 2: Organisation - Theme: Basic thinking operations, i.e: when to use 'analyse,' 'compare,' 'conclude,' etc.

CoRT 3: Interaction - Theme: Intended to be interactive, constructive argument: examining both sides, evidence, agreement, disagreement, irrelevance, outcomes.

CoRT 4: Creativity - Theme: To develop effective new ideas.

CoRT 5: Information and feeling - Theme: These lessons are concerned with information. Includes information, questions, guessing, belief, values and clarification.

CoRT 6: Action - Theme: The purpose of thinking is to end up with some 'action.'

Source: McGregor (2007, p. 115)

Seven key ideas emerge as a result of examining the six themes contained in the CoRT. The first and fourth themes (to broaden perception; to develop effective new ideas) show perspective. The second theme (basic thinking operations, i.e.: when to use 'analyse,' 'compare,' 'conclude,' etc.) contains an element of conclusion. The third theme (intended to be interactive, constructive argument: examining both sides, evidence, agreement, disagreement, irrelevance, outcomes) talks about perspective, evidence, agreement and disagreement. The fourth theme, i.e. to develop effective new ideas, clearly refers to perspective. Finally, the fifth theme (information, questions, guessing, belief, values and clarification) contains the elements of question and clarification. The seven key ideas from CoRT, therefore, deal with encouraging *perspective, conclusion, evidence, agreement, disagreement, question* and *clarification*.

SPTST (Swartz and Park's Thinking Skills Taxonomy), according to McGregor (2007), is the basis for the development of two other critical thinking programmes, namely Activating Children Thinking (ACTs I) and Sustaining Children's Thinking (ACTs II). Those two thinking programmes aim to infuse thinking across the curriculum to make students become better thinkers (McGregor, 2007). The following table illustrates SPTST:

Table 3.14 Swartz and Park's Thinking Skills Taxonomy

Table 3.14

Compare and contrast (how are things similar or different?)
Parts/whole relationships (how do parts of something make up its whole?)
Sequencing (ordering or ranking information)
Uncovering assumptions (what does that mean?)
Reliability of sources (where is this information from? Is it trustworthy?)
Reasons/conclusions (why is something so?)
Causal explanation (how does one thing affect another?)
Prediction (involves hypothesizing: given X, what next?)
Reasoning by analogy (paralleling ideas within different contexts)
Generalisation (developing a framework, model or suggestion that connects multiple pieces of information together)
Conditional reasoning (if this, then that must be so)
Generating possibilities (creating new ideas)
Creating metaphors (devising a unique analogy)
Decision making (weighing up pros and cons to inform a view or decision)
Problem solving (includes thinking up different possibilities to reaching a solution)

Source: McGregor (2007, p. 134)

Examining SPTST generates key ideas that are clearly mentioned in its critical thinking activities such as assumptions, reasons/conclusions, conditional reasoning, reasoning by analogy and prediction. Consequence can be inferred from 'causal explanation (how does one thing affect another?).' Other activities such as 'thinking up different possibilities to reaching a solution,' 'weighing up pros and cons to inform a view or decision,' 'creating new ideas and developing a framework,' and 'model or suggestion that connects multiple pieces of information together' can be

considered to be encouraging perspective. So, the six key ideas promoting critical thinking proposed by SPTST are *assumption, reason, conclusion, prediction, consequence* and *perspective*.

STH (Six Thinking Hats) was created by Edward de Bono and designed “to enable the learners to think in different ways rather than engaging in several different types of thinking simultaneously” (McGregor, 2007, p. 140). There are six hats of different colours that represent the direction of thinking and focus questions. The following table lists the points of the critical thinking programme:

Table 3.15 Six Thinking Hats

Table 3.15

Coloured hat	Direction of thinking	Focus question(s)
White hat	Focus on the facts, figures and information available.	What information do we have? What do we need to know? What question do we need to ask?
Red hat	Description of emotions, feelings, hunches and intuition without giving reasons.	What do I feel about this matter right now?
Black hat	Focus on what could go wrong. Identifying faults or weaknesses. Applying caution.	Does this fit the facts? Will it work? Is it safe? Can it be done?
Yellow hat	Focus on identifying the value or advantages in something. Focus on the benefits and savings there might be.	Why should it be done? What are the benefits? Why it is a good thing to do?
Green hat	Focus on exploration of new and alternate proposals, suggestions, and ideas.	What can we do here? Are there some different ideas/alternate things we can do?
Blue hat	Focus in on thinking about thinking.	What are we here for? What are we thinking

		about? What is the end goal?
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Source: McGregor (2007, p. 141)

The strategies corresponding with the white hat focus on questions about ‘question.’ The strategies with a yellow hat ask about reason. A question in the green hat explores perspective, and two questions with the blue hat can promote viewpoint. Therefore, it can be concluded that the key ideas of critical thinking activities proposed by STH are questions exploring *question, reason, perspective* and *viewpoint*.

Finally, Fisher (2008) proposes story-based activities (FSBA) to promote critical thinking. He states that stories have elements of narrative constructions that are open to reflection, interpretation and discussion and have “a context for critical thinking and discussion on issues of importance” (p. 76). The elements of narrative constructions include contexts, temporal order, particular events, intentions, choices, meanings and the telling. The following table lists the elements and their related questions:

Table 3.16 Fisher’s story-based critical thinking activities (FSBA)

Table 3.16

<p><i>Context</i></p> <p>When does the story take place? (historical context: time)</p> <p>Where does it take place? (geographical context: place)</p> <p>Who is in the story? Who is the story about? (narrative context: society of characters)</p> <p>What is the relationship between the characters? (social context: relationships/interaction)</p> <p>What did the character feel, think and believe? (experiential context: individual view)</p> <p>What did they all feel, think or believe? (cultural context: shared view)</p>
--

Who has the power and authority in the story? (political context: who has power?)

A key question in relation to all these contexts is:

How was it different in that time, place or society? (compare the story context with your own)

Temporal order

What does 'once upon a time' mean?

Who remembers what happened in the story?

What happened in the beginning/middle/end?

Particular events

What kind of event/episode/story is it?

Why did this event happen? / What caused it?

What exactly happened?

What could have happened?

What should have happened?

What could/should happen next?

Intentions

What does X believe?

What does X want?

What does X think . . . ?

What does X want others to think?

What reasons would X give?

What does X think that Y should do?

Why does X think that?

What does X hope will happen?

Choices

What is the decisive moment in the story?

What choices or decisions have to be made?

Who has to make the choice(s)?

What could they do? What alternative choices or decisions are there?

What should they do? What choice would you make?

What choices were made? What were the consequences?

Were they the right choices? Why?

Meanings

What kind of story is it?

Who do you think wrote/told it first?

Where does the story come from?

Can you think of a/another title to the story?

What would you say the story was about?

Is there anything puzzling about the story?

What does this story tell us...?

What does the author/story not tell us?

What is the message (or moral) of the story?

In what ways is it like/unlike other stories?

The telling

Was there anything special about the story?

Was it a well-told story?

Have you heard other stories like this?

What was different about this story?

Could you tell this story in a different ways?

How would you change the characters or events?

If you told the story differently would it be the same story?

Sources: Fisher (2008)

An examination of example questions posed in each element generates some key points which are mostly similar to Paul's TSQ. They include clarification (e.g. What does 'once upon a time' mean?), prediction (e.g. What could have happened? What should have happened? What could/should happen next?, What does X hope will happen), reason (e.g. What reasons would X give?), viewpoint (e.g. What kind of story is it? Why does X think that? What is the decisive moment in the story? What is the message (or moral) of the story? What did the character feel, think and believe? What did they all feel, think or believe?), alternative (e.g. What alternative choices or decisions are there?), consequence (e.g. What were the consequences?) and perspective (e.g. Could you tell this story in a different ways? How would you change the characters or events?). The key ideas of FSBA are questions about *clarity, prediction, reason, viewpoint, alternative, consequence* and *perspective*.

The examination of critical thinking programmes above has generated some key ideas (See Table 3.17). As mentioned, this study adopts the 'third strand' of critical thinking to which Richard Paul belongs. His critical thoughts on weak/strong-sense critical thinking and critical thinking as a tool to respond to a globally changing world fit the Indonesian condition. This is reflected by his interpretation of Socratic questions in which a problem needs to be questioned and seen from various perspectives. Other critical thinking programmes support Paul's thoughts, hence supporting the establishment of this 'third strand' of critical thinking.

Table 3.17 Key ideas of critical thinking programmes

Table 3.17

Agreement
Alternative
Assumption
Clarity
Conclusion
Consequence
Disagreement

Evidence
Implication
Perspective
Prediction
Question
Reason
Summary
Viewpoint

3.3.4 Critical thinking tests

This section reviews critical thinking tests used by researchers and examines them to generate their key ideas. However, as access to commercial critical thinking tests is limited, the review and examination are restricted to the available materials the existing literature includes and the sample tests. The critical thinking tests reviewed and examined include the Watson-Glaser Critical Thinking Appraisal (WGCTA), the Ennis-Weir Critical Thinking Essay Test (EWCTET), The California Critical Thinking Disposition Inventory (CCTDI) and The California Critical Thinking Skills Test (CCTST).

The WGCTA was used by Hashemi and Ghanizadeh (2012), who carried out an experimental study on critical discourse analysis (CDA) and critical thinking in Iranian EFL. They describe the WGCTA as having 80 test items in five subtests: interference, recognizing unstated assumptions, deduction, interpretation and evaluation of arguments. For example, recognising unstated assumptions, which starts from test item numbers 17-32, is described as “recognising unstated assumptions or presuppositions in given statement or assertion” (Hashemi & Ghanizadeh, 2012, p. 40). The *Watson-GlaserTM Critical Thinking Appraisal User-Guide and Technical Manual* indicates that there are three keys to critical thinking: recognising assumption, evaluating argument and drawing conclusion. The manual also states that the ‘interpretation’ subset aims to weigh evidence and decide whether conclusions are warranted while the ‘evaluation of arguments’ subset is to

evaluate relevant arguments related to a particular question. It can therefore be inferred that WGCTA has three key ideas: *assumption*, *evidence* and *conclusion*.

The EWCTET was used by Davidson and Dunham (1997). They explain that there are eight paragraphs with each paragraph illustrating a skill. Paragraph 1, for example, states ‘noticing misuse of analogy and/or shift in meaning,’ indicating that the paragraph requires clarity. Paragraphs 2-5 talk about irrelevant/relevant reasoning, defective reasoning and the lack of a reason. Those four paragraphs clearly deal with reasons. Paragraph seven also talks about the idea of clarity as the skill states ‘recognising equivocation and/or the use of an arbitrary definition.’ The other two paragraphs are about insufficient sampling and the credibility of expert testimony. It can be concluded that the two key ideas contained in EWCTET used to assess critical thinking are *clarity* and *reason*.

The California Critical Thinking Disposition Inventory (CCTDI) “is specifically designed to measure the disposition to engage problems and make decisions using critical thinking” (<http://www.insightassessment.com>) The official website also mentions that CCTDI asks test takers to respond to “the degree to which they agree or disagree with statements” that express beliefs, opinions, expectations, perceptions and values. Two key ideas of CCTDI are *agreement* and *disagreement*.

The California Critical Thinking Skills Test (CCTST) also explores analysis, inference, evaluation, deduction and induction (Clemson University). The website from Clemson University also says that analysis involves identifying assumptions, reasons and claims. While inference skills enable respondents to make conclusions from reasons and evidence, inductive and deductive reasoning deal with drawing inferences. It is concluded that CCTST’s key ideas are similar to the other tests, i.e. *assumption*, *reason*, *evidence* and *conclusion*.

This examination of four critical thinking tests has generated key ideas about what they are testing. The following table list the key ideas of critical thinking tests in alphabetical order.

Table 3.18 Key ideas of critical thinking tests

Table 3.18

Agreement
Assumption
Evidence
Clarity
Conclusion
Disagreement
Reason

3.3.5 Equation and evaluation of key ideas of critical thinking taxonomies, strategies, programmes and tests for their use in this study

This section evaluates and equates the abovementioned key ideas found in the critical thinking taxonomies, strategies, programmes and tests. The result is a new critical thinking framework used in the methodology stage of this study.

The identified key ideas to be used as a critical thinking framework are all aligned to what has been identified as the ‘third strand’ of critical thinking, associated with, among others, Dewey, Brookfield, Paul and Benesch and the discourse of Western democratic thinking. As mentioned, the kind of critical thinking needed in Indonesia is one which makes Indonesians independent and tolerant, sustains a newly democratic country and promotes active participation in society, thus helping Indonesians to resist political and extremist propaganda. The key ideas reviewed and examined above may support the objective as they contain elements which teach learners, among other things, to question, to see things from many perspectives, to give reasons and evidence and to present their viewpoints. These qualities can encourage learners to be - borrowing Paul’s term - strong-sense critical thinkers.

The examination of 20 critical thinking taxonomies, strategies, programmes and tests has generated several key ideas. The entire list of key ideas is (in alphabetical order): *agreement, alternative, assumption, evidence, clarification, conclusion, consequence, disagreement, implication, perspective, prediction, question, reason, reflection, summary* and *viewpoint*. Critical thinking taxonomies, strategies, programmes and tests share most of these ideas. For example, clarity, perspective, assumption and reason are found in all critical thinking taxonomies, strategies, programmes and tests.

However, there is one key idea that is not shared by the critical thinking strategies, programmes, taxonomies and tests. This idea is ‘reflection’; it is only found in Dantas-Whitney’s audiotaped journal assignment for writing task. As proposed by Dantas-Whitney this concept is ‘relating the information to a personal experience or the experience of someone you know.’ This seems to overlap with ‘viewpoint’ and ‘perspective’. As mentioned in the previous section, Dewey states that reflective thinking means examining things, not accepting things at face value. Adopting Dewey’s idea, all key ideas of these critical thinking taxonomies, strategies, programmes and tests can be categorised as reflective thinking. Reflection is, therefore, omitted from the list of key ideas.

Some other activities are not included in the key ideas, as they do not seem to promote critical thinking. For example, one of ten tactics in TTTT is ‘setting your own target - understanding your purpose, wishes and the goals others have for you.’ The idea derived from the phrase is ‘achieving goals,’ though it is not related to critical thinking in this context. Another is ‘sequencing - ordering or ranking information’ which is found in SPTST. This phrase could be a part of the process of gathering evidence. Therefore, these two phrases are not represented in the final list of key words.

This section, therefore, proposes that the textbook evaluation must be done by examining text-based questions and tasks probing/about *agreement, assumption, evidence, clarity, conclusion, consequence, disagreement, implication, perspective, prediction, question, reason, reflection, summary* and *viewpoint*. These ideas create the framework used for the present study.

3.4 The implementation of critical thinking in education, especially in ELT, of non-Western countries

This section reviews a debate on incorporating critical thinking into ELT and critical thinking in non-Western countries. This section proposes to highlight the gap in which even though educational policies regarding critical thinking in non-Western countries have been issued and empirical studies prove that the teaching of critical thinking in those countries is possible, there is no information as to what extent critical thinking has been implemented in their education systems, especially in English language education.

3.4.1 A debate on critical thinking in ELT

Recently, many non-Western countries have begun to include critical thinking in their educational agendas; however, literature has emerged that offers contradictory views about integrating critical thinking into ELT. The term ELT here refers to the teaching of English as a second or foreign language in non-Western countries. A few authors are against it (Atkinson, 1997), but the majority (e.g. Beaumont, 2010; Benesch, 1999; Davidson, 1998; Gieve, 1998; Halvorsen, 2009; Hawkins, 1998; Liaw, 2007; Pally, 1997; Thompson, 2002) are for its inclusion.

Atkinson (1997) is not fully against incorporating critical thinking into ELT. He states that ELT practitioners should be cautious of this idea, stating that:

Although the claim that critical thinking is cultural thinking should not necessarily block the importation of thinking skills instruction into L2 classroom, I believe that it should give TESOL educators pause for thought - and pause long enough to reflect carefully and critically on the notion of critical thinking. (p. 89).

Atkinson (1997) puts forward some reasons as to why ELT practitioners should be cautious in incorporating critical thinking into their teaching. Only his main reason will be argued here, the one reason which genuinely touches the issue of teaching

critical thinking to non-Western students. Atkinson states that native speakers and non-native speakers of English have different ways of thinking; therefore, it is difficult for non-native English speakers to accept the teachings of critical thinking. He argues by asking the question “how might individuals from cultural systems that manifestly differ from mainstream U.S. culture respond to and benefit from thinking skills instruction?” (p.79). To support his argument, he cites some studies (Matsumori, 1981; Clancy, 1986; Scollon, 1991; Carson, 1992) stating the differences between Japanese & Taiwanese (Asian) and American (Western) culture. The studies suggest that while Asian culture values empathy, conformity and group goals above individual interests, American (Western) culture values individualism, self-expression and critical thinking. In Western culture, Atkinson (1997) considers “the locus of thought to be within the individual” (p. 80), which Asian culture does not value.

A few criticisms of Atkinson’s academic judgement may be put forward. First, saying that Japanese and Taiwanese students value empathy, conformity and group goals does not mean that all Asian students are incapable of being critical: by implying this, Atkinson is stereotyping all Asian students. Moreover, if the characterization of Japanese and Taiwanese students is true, it does not mean that they should not be taught critical thinking. In fact, some authors discount his characterization of Japanese students. Kubota (1999), for example, states that “characteristics of Japanese education described in the applied linguistics literature point significantly to less emphasis on creativity, self-expression, individualism, and critical thinking relative to U.S. education. However, many studies on schooling in Japan offer observations of the opposite” (p. 23). To support her opinion, Kubota (1999) refers to some studies (Torrence, 1980; Easley & Easley, 1981; Lewis, 1992; Stevenson & Stigler, 1992; Lee et al., 1996; Tsuchida & Lewis, 1996) which show that Japanese elementary school teachers promote self-expression in various subject areas, promote discussion and problem solving, develop students’ opportunities to think, encourage students to express agreement & disagreement and encourage students to elaborate upon their opinions. In other Asian countries such as Malaysia, Singapore and the Philippines, critical thinking has been practiced in education. This is supported by Davidson (1998) who states

that there were presenters from those countries who reported that they included critical thinking in their teaching while at the *Seventh International Conference on Thinking* in Singapore in June 1997.

Atkinson also suggests that ELT practitioners should be cautious in applying critical thinking. This could mean that as a Western scholar, he is careful about not imposing a Western concept of critical thinking on non-Western communities. However, many non-Western countries have included this concept in their educational agenda without it being first imposed by Western countries. In this context, critical thinking can be associated with ELT in which ELT is not considered a Western ideological imposition on non-Western communities. Canagarajah (1999), for example, provides some examples of how local communities took advantage of ELT by carrying out “their own personal agendas, and foiled the expectation of their masters” (p. 64). This seems similar to education in Indonesia during Dutch imperialism when the objective of teaching a foreign language was to make Indonesians in the process of converting to Christianity better able to read the Bible (Vlekke, 2008); however, education fostered the spirit of nationalism and independence, and eventually Indonesia fought back. In relation to this, Canagarajah (1999) states that:

It is wrong to assume that the cultures of the subordinate groups are always passive and accommodative. They have a long history of struggle and resistance against the dominant cultures, and members of these communities can tap the resources in their cultures to oppose the thrusts of alien ideologies. (p. 25)

Atkinson’s academic judgement could also be seen from another perspective. Western reluctance to incorporate critical thinking into ELT may be seen as a part of Western ‘imperialism’ as non-Western countries will be a passive customer of ELT pedagogy (e.g. curriculum, methods, course books) without a chance to criticise and find the most suitable pedagogy for their country. In a more extreme view, Hawkins (1998) argues that not providing access to critical thinking means preventing English language learners from success. Hawkins (1998) states:

But the understated theme underlying this view (of critical thinking skills) is a political one – that is, that these skills are currently employed by, and privileged in, mainstream (middle-class) U.S. classrooms and communities. And students who can display competence in their use do well in school – that is, they are evaluated and judged on their ability to engage in these sorts of practices, and this fact is reflected in their status and their grades. Therefore, it is precisely these transparent systems and behaviours that learners need in order to become members-in-good-standing of these new communities; by denying access and exposure to students already marginalized by virtue of not having mainstream language and cultural behaviours, teacher are complicit in ensuring their failure. (p. 131)

Taken together, these objections lead to the view that the West may not need to worry about the spreading of critical thinking to non-Western countries as they have a ‘coping mechanism’; neither need the West worry that critical thinking might lead non-Western countries to grab power. Non-Western countries understand why they need critical thinking and know what kind of critical thinking they need. Some academics from Africa, Asia and predominantly Muslim countries have shown their awareness of the importance of critical thinking, considering it a movement towards progress. Also, sporadic critical thinking studies conducted in those countries have been proven successful. These are reviewed in subsection 3.3.3 below.

3.4.2 Critical thinking in non-Western education

This section aims to provide a rationale that critical thinking has been fashionable in several non-Western countries and intended as a means of solving some problems faced by the countries such as promoting democracy, improving the quality of education and keeping up with global changes. This section also aims to show that critical thinking can be implemented in the non-Western countries’s educational

sectors, and non-Western students' critical thinking skills can be improved. Finally, this section aims to show that the third strand of critical thinking is what most developing countries in the world aspire to as they are still struggling with democracy, pluralism and extremism, a condition similar to that of Indonesia.

The section will deal with: the importance of, and educational policies on critical thinking in non-Western countries, empirical studies on critical thinking conducted in those countries and the gap between the objectives of critical thinking policies and actual practices in education.

i. The importance of, and educational policies on critical thinking in non-Western countries

Some non-Western countries have issued educational policies in regard to critical thinking. Also, academics, scholars and even businessmen in those countries have increasing awareness of the importance of critical thinking. The educational policies and the academics' rising awareness of the importance of critical thinking is reviewed below; however, this is not evidence of critical thinking being implemented in non-Western countries.

The South African Department of Education (DoE) released a new curriculum known as *Outcomes Based Education* (OBE) in 1997. The document (as cited in Belluigi, 2009) states, "one of the intended purposes of higher education in South Africa is to contribute to the socialisation of enlightened, responsible and constructively critical citizens through the development of a reflexive capacity" (p. 700). Similarly, Grösser and Lombard (2008) report that "the development of critical thinking skills is regarded as a prominent outcome on the South African education agenda" (p. 1365). According to Braund, Scholtz, Sadeck, & Koopman (2013), OBE actually emphasizes "cooperation, critical thinking and social responsibility, thus enabling individual learners to participate in all aspects of society" (p. 175). In 2006, the DoE introduced a new curriculum for South African schools in grades 10-12. Similar to OBE, this curriculum's emphasis is on developing students' critical and creative thinking skills and abilities (Lubben,

Sadeck, Scholtz, & Braund, 2010). When compared with Indonesia, South Africa seems to have a similar educational agenda. Critical thinking, responsible citizens and creativity are qualities represented in both nations' educational objectives. This is in line with the thoughts of critical thinkers from the Western-democratic tradition, the 'third strand' of critical thinking, which can promote responsible citizenship, thus sustaining democracy (Brookfield, 1987), encourage tolerance in a pluralistic society (Benesch, 1999), promote seeing things from various perspectives, hence avoiding weak-sense critical thinking (Paul, 1990) and improve the quality of learning (Dewey, 2004).

In other parts of Africa, problem-based learning (PBL), which is closely related to critical thinking, has been introduced in ELT curricula. In addition to promoting students' critical thinking, PBL is also believed to increase students' life-long and effective learning, provide a depth of knowledge (Legg, 2007; Tatar & Oktay, 2011) and help students develop reasoning (Barrows, 1986). With regard to this, Schleppegrell & Bowman (1995) report that:

Since 1990, a series of curriculum renewal workshops sponsored jointly by the Ministries of Education and the US Peace Corps brought together African secondary school teachers and American volunteers who are teaching EFL in rural areas of Guinea-Bissau, Sao Tome, the Comoros Islands, and Gabon. Participants identified topics that would motivate their students, planned lessons related to those topics, and practised problem-posing and co-operative learning techniques. They then returned to their classrooms to try out the new material, and through a process of exchanging ideas and refining drafts, collaboratively produced new lessons for a variety of levels, renewing and further developing the national ELT curricula. The lessons they created provided practice in English, while at the same time helping students develop critical thinking skills through discussion of key issues in their lives" (p. 297).

In Nigeria, even though critical thinking does not seem to be applied thoroughly in education, some who are aware of the importance of critical thinking in education have taken action. For example, CELLE (the Centre of Excellence for Literacy and Literary Education), a Non-Governmental Organization in Nigeria, has set up reading clubs (Onukaogu, 1999). Members of the clubs come from different religions, educational backgrounds, genders, professions and races. In the meetings they are taught the art of creative and critical reading and thinking, the art of questioning an author and the art of problem-solving techniques. The clubs, according to Onukaogu (1999), aim to enhance the members' self-esteem so that they feel empowered to address conflicts in society and have the knowledge and skills to foster national development. It shows that they have realized the importance of critical thinking to address the issues of democracy.

The People's Republic of China has started to incorporate critical thinking in their education according to Richmond (2007). He states that China's governmental agencies support the use of the case study method in teaching learning processes, which could encourage students' critical thinking. Also, the present work shows that China has included a critical thinking section in its English textbooks for university students. For example, *New Standard College English*, a series of English textbooks edited by Simon Greenall and Mary Tomalin, contains 'Developing critical thinking' sections in each unit. The book states that this section is "a series of questions which develop the ideas presented in the passage, and encourage independent thinking" (p. V). However, there is very little information from the literature as to whether critical thinking has also been included in other textbooks, including those used by Chinese secondary school students, or how the educational authority in the country deals with addressing critical thinking.

Hong Kong, a special administrative region of the People's Republic of China that enjoys a high degree of autonomy (<http://www.hketousa.gov.hk>), has included critical thinking in its education. A document released by the University of Hong Kong in 1999 states that the business sector often complained about local students' lack of critical thinking abilities (Mok, 2009). As a result, educational reform was launched to improve education and equip students with the skills necessary to cope

with the rapidly changing world. The reform was marked by the release of a critical thinking syllabus by Curriculum Development Council. Regarding critical thinking in the English curriculum, Mok (2009) writes:

In 1999, a new set of guidelines was issued to all secondary school English language teachers in Hong Kong. New emphases of the guidelines included recognition of the significant role thinking plays in English teaching and learning, and the requirement for teachers to develop students' critical thinking. (p. 263)

In South Korea there have been very few studies on critical thinking and the literature on the existence of critical thinking in the country is very limited. However, there seems to be an awareness of the importance of critical thinking among the country's academics. For example, with respect to nursing education, Shin, Lee, & Ha (2006) argue that "the development of critical thinking disposition and decision-making ability through clinical practices has become an important issue in nursing education in Korea" (p. 183).

Taiwan, another country with influences from Confucian Heritage Culture (Chiu, 2009), has realized the importance of critical thinking as demonstrated by its inclusion in its educational agenda. In 2001 the Ministry of Education of Taiwan designed a new curriculum to accommodate critical thinking. Yang and Chung (2009) state:

The Ministry of Education of Taiwan (2001) developed a 9-year integrated curriculum, which focused on independent critical thinking and problem-solving ability as educational goals in social studies... The Taiwanese Ministry of Education has stressed that the focus of schooling must shift from teaching to learning, namely, from passively acquiring facts and routines to actively applying ideas to problems. (p. 31)

Though the introduction of a new integrated curriculum focusing on critical thinking skills and problem solving abilities in Taiwan was more than 13 years ago, there is little evidence of critical thinking education being implemented in the country.

A similar thing has also happened in Japan where the education authority reformed its education system to including critical thinking more than 12 years ago. As reported by Monbusho and Takakura & Murata (as cited in Howe, 2004), critical thinking has been “an integral part of education reform in Japan” (p. 505). Howe (2004) also states that the Japanese government has reformed its education system by emphasizing critical thinking. A document released by the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT) in 2002 reported that the new course called the *Period of Integrated Study* was introduced into schools with the purpose of helping students develop, among other things, independent thinking, problem solving, curiosity and creativity (Rear, 2008). According to Rear, critical thinking discourse appears in the country due to the economic decline leading to the reinterpretation of skills needed by the Japanese to face global competition. This similar idea is also stated by the most influential business organisation in Japan, Nippon Keidanren in 2003, (as cited in Rear, 2008) whose documentation includes the statement that “corporate employees must develop sophisticated judgement and problem-solving skills based on a broader perspective than before.”

Countries in Southeast Asia have formed the ASEAN (Association of South East Asian Nations) organisation. The organisation, which was officially established on August 8, 1967, has a motto *One Vision, One Identity, One Community*. The members of ASEAN are Indonesia, Thailand, the Philippines, Malaysia, Singapore, Brunei Darussalam, Vietnam, Cambodia, Laos and Myanmar. Some ASEAN countries have sought to introduce critical thinking to reform their education.

Singapore, for example, is very serious in promoting critical thinking. Richmond (2007) reports that Goh Chok Tong, the Singaporean Prime Minister, announced a new programme called *Thinking Schools, Learning Nation* (TSLN). This programme focuses on creative thinking and learning skills. According to Baildon

and Sim (2009), *Thinking schools* means educational institutions in Singapore can produce citizens who have an ability to think critically and creatively, “while *learning nation* emphasizes that the culture of thinking and lifelong learning should be high on the educational agenda” (p. 407).

Singapore has also incorporated critical thinking skills in its school textbooks. For example, *Step Ahead*, the English textbook approved by the Ministry of Education of Singapore, has included a *Thinking Strategies* section along with sections on grammar, oral communication, listening, reading and vocabulary. This may be because the government of Singapore “has placed thinking skills and critical thinking at the heart of the education system” (Matthews & Lally, 2010, p. 122). More recently, Tan (as cited in Matthews and Lally, 2010) stated that Singapore has revised the curriculum for their ‘Junior College’ by including training in critical thinking skills. In fact, there are some other aspects Singapore aspires to improve by seriously introducing critical thinking in education. The Ministry of Education of Singapore released the following statement:

The promotion of a thinking culture is not confined to teaching critical thinking in schools. The overarching TSLN mission is to find new ways to solve many problems in pedagogy, administration, student affairs or staff-related matters. Within schools, “work improvement teams” and participation-in-suggestion schemes have been introduced.
(Koh, 2002, p. 257)

Going beyond the educational context, the introduction of critical thinking in Singapore, according to Baildon and Sim (2009), aims to foster nationalism, national pride, harmony, and good governance to respond to rapid complex changes in the globalization era.

In Thailand, the government released the National Education Act in 1998. According to Pitiyanuwat and Sujiva (2000), this is the law that governs educational reform and encourages the local administrative authorities and the private sector to provide education (formal, non-formal and informal). Pitiyanuwat and Sujiva go on

to say that the act focuses on knowledge, the learning process and the integration of some areas, one of which is “thinking processes, problem solving, and management” (p. 90). The Secretary General of Thailand’s National Education Commission complained about what he called ‘chalk and talk’ pedagogy and rote learning so “the new Thai programme was established to provide training in thinking processes and the application of knowledge for solving problems” (Richmond, 2007, p. 7). Another Thai author, Hongladarom, (as cited in Baker, 2008) argues that it is already “appropriate for Asian and Thai culture to emphasize critical thinking over other values, especially given the increasing amount of information and cross-cultural contacts Thailand is now exposed to” (p. 140).

Richmond (2007) states that the Vietnamese government has set up a campus, with help from an educational institution from Australia, which adopts their learning culture. However, there is very little information on how the educational authority of Vietnam responds to the development of critical thinking, or whether the Australian learning culture will be an educational barometer in the country.

Though very few studies have reported how critical thinking has influenced education in the Philippines, a research on Google books shows that critical thinking has been incorporated in Philippine English textbooks. For example, *Side by Side*, an English textbook for the elementary level in the Philippines, written by Antonio, Banlaygas, Borlagdan, Lodronio, & Dallo (2002) contains ‘Thinking’ sections. The ‘Foreword’ page of the book explains that the sections “are challenging vocabulary exercises that seek to enhance word attack skills that enable the learner to read independently. Also included here are activities that develop multi-dimensional reading comprehension, cognitive, metacognitive and higher order thinking skills” (p. vi).

Malaysia, which has a similar language, religion and culture to Indonesia, is reported to have adopted critical thinking by introducing a ‘Smart School Programme’ (Richmond, 2007). Salih (2010) reports that Malaysia’s Curriculum Development Centre has constructed a conceptual framework entitled *Thinking Skill Thinking Strategy* (TSTS) with the purpose of infusing critical thinking into school subjects. It is not clear whether the framework is intended for use in all subject

matters taught in school; however, the TSTS framework is reported to have become a guide for teachers in the teaching-learning processes. Shakir (2009) reports that the “Minister of Higher Education announced that public universities in Malaysia must introduce soft skills (communication, critical thinking and problem solving, team work, lifelong learning and information management, entrepreneurship, ethics, and professional moral and leadership skills) and incorporate them in the undergraduate syllabus” (p. 309). Another Malaysian author Md Zabir reports that the Malaysian government has released the *Educational Development Main Plan* focusing on critical thinking skills. The document (as cited in Md Zabir, 2010) states:

Education plays an important role in developing human capital with a strong identity, competence, positive attitude, knowledgeable and high-skilled in order to fulfil the needs of the developed nation in 2020. The human capital to be cultivated should be able to think critically and creatively, to solve problems, having the capacity to create new opportunities, having the resilience and the ability to face the changing global environment. (p. 26)

Another country in South East Asia that is also very closely related to Indonesia in terms of language, culture and religion is Brunei Darussalam. Roslan (2010) reports that a critical thinking skills workshop for primary school teachers and Arabic preparatory schools has been conducted and facilitated by the Ministry of Education of Brunei Darussalam and the University of Brunei Darussalam. Unfortunately, there is very little information on how the workshop has contributed towards the development of critical thinking in the country.

Some predominantly Muslim countries have also grown to be aware of the importance of critical thinking. In Bangladesh, for example, Shaila and Trudell (2010) report that the Centre for Languages at BRAC University in Bangladesh has realized the importance of a programme focusing more on academic challenges. To implement this, the university’s planning group has agreed to integrate critical thinking throughout the curriculum. This is, according to Shaila and Trudell (2010),

because “the ability to think critically is especially important for students living in a country with political and socioeconomic problems, for it will help them to look at issues from different viewpoints and become independent thinkers and responsible citizens” (p. 5-6).

In Turkey, the school curriculum has changed several times, and according to Yasar and Seremet (2009) the most significant change occurred in 2005 when elements of critical thinking were added. They report that:

The curriculum for 2005, on the other hand, is based on “process model” teaching strategies and student activities involving life-related problem solving. In other words, the curriculum for 2005 requires teaching strategies that make the students participate in the learning–teaching process in an active way inside and outside the classroom. It is a student-centred programme that requires active participation by the students at every stage of the teaching process. (p. 174)

In Jordan, Bataineh and Zghoul (2006) state that:

Despite limited resources, the Jordanian Ministry of Education is called upon to conduct critical thinking workshops for its teachers, which, coupled with these teachers’ self-initiated professional development, will certainly reflect positively on the students, especially if the design of these workshops took into account the learning context, the students’ needs and their learning styles. (p. 47-48)

This section has attempted to show that non-Western countries have been aware of the importance of critical thinking. Several countries in Africa, Asia and other Muslim countries have been interested in including critical thinking in their education. Also, there has been an increasing awareness of the importance of critical thinking among academics in those countries. A few non-Western countries have taken real action by issuing educational policies regarding critical thinking.

However, even though policy statements have been released and concerns surrounding critical thinking have been voiced by academics, there is very little evidence of critical thinking education being implemented in those countries.

ii. Empirical studies on critical thinking in non-Western countries

A few studies on critical thinking in an ELT context have been conducted and reviewed in the previous section. This subsection reviews several studies on critical thinking in a different context.

Several studies (Jawarneh, Iyadat, Al-Shudaifat, & Khasawneh, 2008; Fahim & Nasrollahi-Mouziraji, 2013; Ha, 2004; Korkmaz & Karakus, 2009; Saalu, Abraham, & Aina, 2010; Shin, Lee, & Ha, 2006; Yang, 2008) on critical thinking have been conducted in non-Western countries. Apart from showing non-Western academics' interest in and awareness of the benefits of critical thinking, the studies also prove that non-Western students may be capable of learning critical thinking.

Nevertheless, similar to the previous review of educational policies on critical thinking, studies reviewed in this section do not provide evidence of critical thinking being implemented in non-Western countries.

In Nigeria, Saalu, Abraham & Aina (2010) conducted a study introducing Problem-Based Learning (PBL) at the Lagos State University College of Medicine in Nigeria. The study involved 76 students in 40 classes. Half of these classes were taught using the PBL approach, and the other 20 were taught using the Traditional Didactic Lecture (TDL) method. The study also investigated students' perception of PBL. The result showed that the PBL approach was more effective in helping students learn the materials and gain higher scores than the TDL method. The study also discovered that the majority of students perceived that PBL promotes better student participation in the learning process when compared to TDL. Saalu, Abraham & Aina (2010) concluded that "PBL improved student's perception of their anatomical knowledge, fulfilling learning objectives, participation in the learning process, reflective/critical thinking, learning fun and interpersonal skills acquisition" (p. 196).

In South Korea, Shin, Lee, & Ha (2006) conducted a study to understand and compare dispositions toward critical thinking in nursing students by adopting a longitudinal inquiry at a baccalaureate university programme between 1999 and 2002. There were 32 students who participated four times in completing a questionnaire. The study used *The California Critical Thinking Disposition Inventory* to measure students' critical thinking disposition, and it reported that there was a statistically significant improvement in critical thinking disposition of the participants. Therefore, Shin et al. (2006) urge that nursing students in South Korea should be taught critical thinking skills and dispositions to equip them with the ability to make critical decisions.

In Taiwan, several critical thinking-related studies at secondary and higher education levels have been conducted (Chiu, 2009; Huang, 2012; Yang, 2008; Yang & Chou, 2008; Yang & Chung, 2009). Yang (2008), for example, conducted a study to investigate the effects of teaching critical thinking skills in a large class through asynchronous discussion forums (ADFs) facilitated by teaching assistants. Yang defines ADF as a text-based computer mediated tool that is promising for an opportunity to mediate interactive discussions outside of the classroom. This quasi-experimental design involving 278 college students used Socratic and non-Socratic dialogues as the independent variables. The dependent variable was the students' levels of critical thinking skills that were measured using *The California Critical Thinking Skills Test* and *The Coding Scheme for Evaluating Critical Thinking in Computer Conferencing*. The qualitative analysis described how students' discussions moved from lower to higher phases of critical thinking. Results indicated that an inspired instructor and energetic teaching assistants who used Socratic dialogues during small-group online discussions successfully improved students' critical thinking skills.

In Vietnam, Ha (2004) studied two Vietnamese English teachers. She explored their teaching experiences to find out how they taught their students. She conducted in-depth interviews and examined their journal entries. The study showed that the two teachers encouraged students to ask questions and express their opinions. They did not want to impose their own ideas on their students and encouraged them to find

things by themselves. This, according to Ha (2004), could help students become engaged in reflective and critical thinking and contests the stereotype that Asian teachers are authoritarian in teaching style. This is supported by another Vietnamese author Le (2005) who argues that “regardless of how reserved students are, I believe that teachers of English can adopt various strategies to increase classroom participation and critical thinking” (p. 3).

In Turkey, Korkmaz and Karakus (2009) carried out an experiment with a group of students in a Geography course at Kırşehir High School in Turkey. In total, 57 students were involved in the study, with 28 in the experimental group and 29 in the control group. Three questions were posed: Does blended learning change student attitudes towards Geography courses? Does blended learning change students’ critical thinking dispositions and levels? What is the relationship between students’ critical thinking dispositions and levels and their attitudes towards Geography courses?

In the study, the control group was taught using a traditional teacher-centred and lecturing approach with question and answer sessions. The experimental group was taught through a website with various visuals and animations in a computer lab with one computer for each student. The students were assigned activities on the website outside of the classroom and were asked to deliver their assignments via the instructor’s e-mail. *The California Critical Thinking Disposition Inventory* (CCTDI) was used to measure the students’ critical thinking disposition. To investigate the third research question, the study showed that a blended learning model may contribute to critical thinking disposition. Korkmaz and Karakus (2009) state that:

When compared to the traditional instruction method, the blended learning model contributes more to critical thinking dispositions and levels of students. Examining the sub-dimensions of critical thinking, this contribution is manifested particularly at the sub-dimensions of open-mindedness and truth-seeking” (p. 61).

In Iran, a number of studies on critical thinking have been conducted (Alizadeh, Jahandar, & Khodabandehlou, 2013; Barjesteh, Alipour, & Vaseghi, 2013; Birjandi & Alizadeh, 2013; Birjandi & Bagherkazemi, 2010; Fahim & Hashtroudi, 2012; Fahim & Nasrollahi-Mouziraji, 2013; Tabatabaei & Parsafar, 2012; Tajvidi, Ghiyasvandian, & Salsali, 2014). Fahim and Nasrollahi-Mouziraji (2013), for example, conducted a study by posing the question “Is there any relationship between Iranian students' self-efficacy and their critical thinking ability?” The study involved 50 first-year students majoring in English teaching at the Islamic Azad University of Amol, Iran. Banduras' self-efficacy questionnaire and *The California Critical Thinking Skills Test-Form B* were used as the test instruments. Based on the results of the study, Fahim and Nasrollahi-Mouziraji (2013) write that:

The result of Pearson's correlation coefficient indicates that EFL learners' self-efficacy beliefs have significant effect on their critical thinking levels. In other words, the higher the level of students' self-efficacy, the higher their critical thinking ability. In particular, the results reinforce previous research that indicates a close relationship between critical thinking ability and learners' self-efficacy in learning a second language. (p. 541)

In Jordan, Jawarneh, Iyadat, Al-Shudaifat, & Khasawneh (2008) conducted a study to discover the effect of using ‘The Monro and Slater Strategy’ and ‘The McFarland Strategy’ to develop Jordanian eight-grade students’ critical thinking skills. They define The Monro and Slater Strategy as procedures that distinguish facts and opinions during classroom discussions, while The McFarland Strategy aims to present examples that help teach skills to distinguishing between materials that relate to a topic and materials that do not. The target population of the study consisted of the grade-eight students in Irbid, Jordan who were registered for the 2006-2007 academic year. *The California Achievement Test*, which was translated into Arabic, was used to assess their critical thinking skills. The study, which involved 209 students and adopted a quasi-experimental model, showed that there were significant differences between the experiment and control groups in favour of

students in the experimental groups. Based on the results of the study, Jawarneh et al. (2008) recommend that critical thinking be incorporated into school curriculums, teachers be trained in effective teaching strategies, environments be provided to promote students' critical thinking skills, and programmes for teaching critical thinking skills be designed.

In Kuwait, Al-Fadhli and Khalfan (2009) conducted a study at Kuwait University to discover the impact of e-learning models on improving critical thinking. There were 77 student participants, with 45 students in the e-learning groups and 32 in the traditional (control) groups. The study used *The California Critical Thinking Skills Test* to examine the effectiveness of the model. While the control groups were taught in a traditional manner with lecturing as the main teaching activity, the e-learning groups were taught using an e-learning model with several two-way interactive activities. The result showed that the e-learning groups scored higher than the traditional group, not only in the mean score but also in the five critical thinking skills, namely, analysis, evaluation, inference, inductive and deductive reasoning.

In sum, the empirical studies above reveal at least three points. First, that non-native English-speaking students are capable of learning critical thinking. Secondly, that critical thinking has become fashionable in non-Western countries and can be used as an additional teaching approach to enhance learning. And thirdly, that there are increasing numbers of academics in non-Western countries interested in critical thinking. The studies, however, may not be sufficient evidence to show that critical thinking has been (fully) implemented in these countries.

iii. Reasons of adopting critical thinking and actual practices in non-Western countries

Countries in Africa, Asia and some Muslim countries have shown their interest in critical thinking, especially through their academics, regardless of some of the literature's pessimistic views on teaching these skills to non-Western students. While the literature suggests that the United States, representative of Western

countries, initially adopted critical thinking as a movement towards liberalism (social) and now still teaches it in order to, among other things, lead the global competition (economic), the policies issued by non-Western countries reflect the same idea: that critical thinking is a movement towards progress. The progress here can be seen as a response to social and economic factors in line with global change, and/or resistance to Western or global 'imperialism'.

Examining educational policies and judgements of the academics mentioned above, non-Western countries have their own respective agendas. If grouped together, the aims of adopting critical thinking for non-Western countries fall into several categories such as promoting democracy and harmony, developing responsible citizens, encouraging nationalism and national pride, enhancing good governance, playing a more important role in global competition, coping with a rapidly changing world, fulfilling the requirement to become a developed nation, or simply improving the overall quality of education.

Pluralistic countries, or countries whose socio-political conditions are not strong adopt critical thinking to deal with the issues of democracy, harmony, and responsible citizenship. Bangladesh, for example, needs to teach critical thinking to help people to be able to see things from various perspectives in order to promote a responsible citizenry (Shaila & Trudell, 2010), thus reducing conflicts and promoting democracy. A similar objective is proposed by Onukaogu (1999) for Nigeria through promoting critical thinking to address conflicts in society. South Africa clearly states this in its educational document by teaching critical thinking to make people aware of their social responsibility (Braund, Scholtz, Sadeck, & Koopman, 2013), a concept closely related to democracy. However, a more advanced country, Singapore, also includes harmony, nationalism and national pride as critical thinking objectives. This may be due to the fact that the country consists of several diverse ethnic groups originating from China, Malaysia, Indonesia and India (Kuo & Seen-Kong, 1984) that may create conflict without these skills.

Countries whose economies are strong and whose socio-political conditions are relatively stable may adopt critical thinking as a means of being able to compete in the global era. These countries seem to be less pluralistic. For example, Japan

includes critical thinking as a result of the pressure of business organisations wanting to win global business competition (Rear, 2008), aside from simply improving the quality of their education. Democracy does not belong to the Japanese critical thinking objective because there are almost no sectarian conflicts in the country as, according to Kumagai (as cited in Lie, 2001), the Japanese community is ethnically and racially homogenous. In reference to Table 3.2, what Japan needs may be critical thinking activities such as ‘thinking creatively,’ ‘thinking deeply,’ ‘thinking independently,’ and ‘solving problems.’

Similar to Japan, the inclusion of critical thinking in Hong Kong is in response to complaints from the business sector; democracy and toleration, for instance, do not appear in Hong Kong’s aspirations regarding critical thinking. In Singapore, aside from promoting harmony and building nationalism, they adopt critical thinking to produce people who are ready for the rapid change of the world. This indirectly states that they want to play a bigger role in this era of globalisation. This may be due to Singapore’s very good economic condition at present. A very clear statement comes from Malaysia, which adopts critical thinking as it aspires to become a developed nation by 2020 (Md Zabit, 2010). Also, this may be due to Malaysia’s good economic and political condition, along with the academic progress occurring in the country.

Other countries such as Taiwan, the Philippines, Vietnam, Brunei Darussalam and others have not expressed clear intentions regarding critical thinking. However, the academics of those countries have conducted studies proving that teaching critical thinking in non-Western countries may be possible and that non-Western students’ critical thinking skills may be developed. Teachers in Brunei Darussalam have been trained in critical thinking, even though there is little information regarding how critical thinking has been applied in education in the country. It could be inferred that these countries, or at least the academics of the countries, desire to improve the quality of education by including critical thinking development.

The table below lists the agenda of incorporating critical thinking into education in several non-Western countries, taken from the information above (government document and academics’ perspectives). China, Turkey, India, Brunei Darussalam

and the Philippines are excluded, as the information available does not show clear objectives.

Table 3.19 The agenda of non-Western countries' adoption of critical thinking

Table 3.19

No	Countries	Critical thinking objectives
1	South Africa	Promoting democratic, constructive and responsible citizens, developing students' critical and creative thinking skills and abilities.
2	Nigeria	Promoting empowerment to address conflicts in society (democracy).
3	Hong Kong	Equipping students with skills to cope with rapidly changing world.
4	South Korea	Equipping students with critical decisions.
5	Taiwan	Improving the quality of education.
6	Japan	Improving the quality of education, helping students develop independent thinking, problem solving, curiosity and creativity, preparing for global competition.
7	Singapore	Promoting critical and creative thinking, solving many problems in pedagogy and administration, fostering nationalism and national pride, harmony and good governance, responding to changes in globalisation era.
8	Thailand	Dealing with the increasing number of information and cross-cultural contacts.
9	Vietnam	Improving the quality of education.
10	Malaysia	Developing human capital to fulfil the needs of the developed nation in 2020.

11	Bangladesh	Dealing with political and socioeconomic problems, promoting independent thinker and responsible citizen (democracy)
12	Jordan	Promoting the quality of education.

In Indonesia, as mentioned, critical thinking has been included in the educational objectives, together with tolerance and democracy. Similar to Nigeria and Bangladesh, democracy and tolerance are included to deal with the issues of sectarian conflicts and extremism. Besides this, as Indonesia's economic condition is developing, the country may also aspire to produce qualified students. The educational objectives, therefore, include such personal qualities as being critical, skilful, creative, innovative and independent. This is similar to countries such as Singapore, Japan, Hong Kong and Malaysia. However, critical thinking seems to be absent in a practical sense in Indonesia, and some academics (Alwasilah, 2002; Nugroho, 2008; Soeherman, 2010; Syaifudin & Utami, 2011) voice their concerns regarding the lack of critical thinking. The Indonesian academics' concern is also justified by Meyer and Kiley. After studying available literature, Meyer and Kiley (1998) state that:

A consistent finding of these studies is that Indonesian students have particular difficulty with the Western approach to *critical thinking*, which is reflected in their reading and writing. Furthermore, students, while acknowledging that difficulty with the English language contributes to these problems, indicate that a major source of learning difficulties is the education system in Indonesia itself, which is perceived to not encourage critical and independent learning. (p. 288)

To summarise, in the non-Western world of which Indonesia is part, critical thinking has been very popular at the level of educational policy development where countries seem keen to incorporate critical thinking into their educational agenda to address various issues. However, there is very little information on critical thinking implementation in the countries' educational sectors. Empirical

studies presented above also do not show the implementation of critical thinking in those countries. The studies show the academics' interest in and awareness of the importance of critical thinking and may prove that non-Western students are capable of learning critical thinking skills. There is a gap between policy statements and actual practice in those non-Western countries, including Indonesia. Therefore, there is a need for a study to bridge that gap which the present study attempts to fill by offering a method to investigate critical thinking in education.

Chapter 4: Methodology of the study

4.1 Introduction

This chapter describes the research methodology and methods adopted for the present study. It consists of seven main sections. It starts with an introduction, followed by section two, which briefly discusses the research worldview which provides the underlying orientation to determine the research questions for this study. Section three, research scope, elaborates the textbooks and the participants of the study. Section four discusses data collection and analysis methods. The three research methods considered suitable for answering the research questions are content analysis, qualitative analysis of text-based responses and interview. Section five presents the pilot study and discusses its results. The validity and reliability of the study are presented in section six. Finally this chapter ends with the analysis triangulation by asking ELT professionals to check a sample of coding and code a few sample pages of textbooks.

4.2 Research worldviews

The relevant literature identifies four kinds of research worldviews: positivism (postpositivism), constructivism, participatory and pragmatism. While positivism, according to Creswell and Clark (2011), is connected with a quantitative approach, as researchers make claims for knowledge based on, among other things, “reductionism, by narrowing and focusing on select variables to interrelate, detailed observations and measures of variable” (p. 40), constructivism and participatory are associated with qualitative research. The difference is that constructivism focuses on participants’ subjective views, whereas participatory is concerned with improving society so as to deal with such issues as empowerment, marginalization and hegemony (Creswell & Clark, 2011). Finally, pragmatism, still according to Creswell and Clark, focuses “on the primary importance of the question asked...and

on the use of multiple methods of data collection to inform the problems under study” (p. 41).

Having identified four kinds of research worldviews, the question arising was how these worldviews might help find and construct a methodology for this study, to satisfactorily answer its research questions. The two research questions posed in the study were:

1. Do Indonesian ELT textbooks facilitate the teaching of critical thinking skills?
2. How do Indonesian students respond to modified teaching materials containing the elements of critical thinking?

Considering the first research question, a participatory worldview seemed entirely inappropriate for the reason that it was textbooks, not human participants, which comprised the subject of this question. Taking the other research question, a participatory research view was not suitable for this study either, because the study did not directly aim to improve society, dealing with issues such as empowerment, hegemony or marginalization, as has been discussed in Chapter Three, adopting the ‘third-strand’ of critical thinking and rejecting Marxist and Freiran’s critical thinking.

Of the other three research worldviews, pragmatism seemed to be the best approach to answer the first research question at first. For the practical purpose connected to the Indonesian context, the ways a pragmatic approach answered the question would be beneficial and could be considered more important than conforming this research to more academic or intellectual paradigms. However, for the work of this doctoral research, there may have been too many objections raised if academic and intellectual paradigms were simply ignored, along with the question of how, exactly, the thesis were to take Applied Linguistics knowledge forward: if Applied Linguistics as a discipline is not entirely sure of the extent to which textbooks may facilitate critical thinking skills, what does this thesis offer in terms of a response? That is why adopting a purely pragmatic approach would not have been acceptable, as it would serve to answer only the practicalities of the Indonesian situation, not the wider world of Applied Linguistics.

Positivism, which seeks “understanding in terms of cause and effect rather than the meanings of individuals” (Clark-Carter, 2004, p. 11), could be adopted to answer the first research question, as it is believed to be an objective and robust approach. Enabled positivist approach would provide academic and intellectual support, as mentioned above. Adopting this approach, the research could quantify the data from the materials analysed, Indonesian ELT textbooks. Focusing on the questions or tasks and eliminating other variables might be considered straightforward, one of the benefits of applying this approach. There is a problem, however, when dealing with the elusive concept of, and confusion over, critical thinking, as in part reviewed in the previous chapter. From the positivistic viewpoint, content analysis, which was the method adopted in this research, would be quantifying the contents of textbooks and presenting them in numerical data. This, however, brought about a question: what exactly would be counted and quantified?

The question raised with regard to a postpositivistic approach led to a consideration of constructivism. A constructivist approach might support the research in terms of constructing a hypothesised ‘critical thinking.’ This required an element of subjectivity, characteristic of constructivism. At the same time, a positivistic approach could be employed to quantify instances of ‘constructed critical thinking facilitation.’ Supporting the construction of ‘critical thinking’ with quantification would produce robust and quasi-objective results.

The combination of constructivism and positivism was therefore adopted in this research. A set of critical thinking categories to check questions contained in the Indonesian ELT textbooks was constructed by using a rigorous critical review of all relevant historical and contemporary thoughts on criticality. The categories were then used for conducting content analysis in a positivistic fashion, through which items in the textbooks were counted and quantified by being matched against the categories

4.3. Research scope

As mentioned, this study aims to investigate whether Indonesian ELT textbooks used by senior secondary schools facilitate the teaching of critical thinking skills and to find Indonesian students' responses to modified reading materials containing the elements of critical thinking. To answer the research questions, both textbooks and Indonesian senior secondary school students were used as samples and participants.

4.3.1 Textbooks

Indonesian senior secondary school lasts for three years, beginning at class/grade X and going on to XII. This level of education is the continuation of the junior secondary level that also lasts for three years. The government of Indonesia provides textbooks for all levels of education and subjects for free. Students and teachers can download the books from the government's website as the books' copyright has been bought by the government. These are called BSE (*Buku Sekolah Elektronik*) books or Electronic School Books. Most schools in Indonesia use BSE books. However, schools are also permitted to use other books (commercial textbooks available in the market published by private publishers) as long as the Ministry of National Education of the Republic of Indonesia has approved the books for their use at school. A very small number of elite private schools in big cities that also adopt foreign curriculums use textbooks from foreign publishers.

As mentioned in chapter two, a new curriculum has been released recently. As of the end of 2014, when this study was finished, two English textbooks for grade X and XI semester one were available. However, the textbooks are still subject to revision, and they are only used by a small number of schools used as a pilot project for this curriculum. In fact, all grade XII classes around the country still use the textbooks from the previous curriculum, the 2006 curriculum. This study analysed the English textbooks from the 2006 curriculum.

There were two titles of textbooks used by senior secondary schools: *Developing English Competencies* and *Interlanguage*. Schools were free to choose which of the two BSE textbooks they wanted to use. However, the local education department in each province also had a say. Every province had a different policy. For example, the present work shows that public schools in the Jakarta province used *Developing English Competencies*. The books were multiplied by the local authority and distributed to all public schools in the province. There are 114 public senior secondary schools (lintasjakarta.com) and 30 public vocational high schools (www.scribd.com) in the province of Jakarta. As a result, public school students in Jakarta did not have to download the book by themselves. In practice, however, teachers may have used *Interlanguage* or other books available in the market for supplementary materials as needed.

In fact, Indonesia's educational system for senior secondary school has already given an opportunity for students to choose their interest in a specific subject. It starts from class XI, the second year of senior secondary school. There are three majors offered to the students: *Language Programmes*, *Social Sciences* and *Natural Sciences*. The majors will influence students' choice at university. For example, students majoring in the language programmes and social sciences cannot study medicine at university, but students taking a natural science programmes may study anything at university.

Students majoring in the social and natural sciences used the same English textbook. Therefore, beginning with class XI, *Developing English Competencies* and *Interlanguage* provided two kinds of books. One was for students of language programmes and the other was for students studying either natural or social sciences. There were 10 textbooks altogether. The following table lists the titles of the BSE English textbooks for senior secondary schools in Indonesia.

Table 4.1 The list of BSE (Electronic School Books) English textbooks used by Indonesian senior secondary school.

Table 4.1

No.	Title
1.	Developing English Competencies (Grade X)
2.	Interlanguage (Grade X)
3.	Developing English Competencies: Language Programme (Grade XI)
4.	Developing English Competencies: Natural and Social Science Programme (Grade XI)
5.	Interlanguage: Language Programme (Grade XI)
6.	Interlanguage: Natural and Social Science Programme (Grade XI)
7.	Developing English Competencies: Language Programme (Grade XII)
8.	Developing English Competencies: Natural and Social Science Programme (Grade XII)
9.	Interlanguage: Language Programme (grade XII)
10.	Interlanguage: Natural and Social Science Programme (Grade XII)

The study analysed BSE books only, not commercial books available on the Indonesian market, as BSE books were most common for use in schools around the country. As BSE books had been through the Ministry of National Education's evaluation and had been officially approved for classroom use, the books were deemed to be representative for this study.

4.3.2 Participants

The study took place in four senior secondary schools in Jakarta: two upper-class private schools and two public schools. Upper-class private schools in Indonesia exist only in big cities such as Jakarta, Surabaya, Bandung and Medan, and there are fewer of them than lower-class private and public schools. This is due to the price of such schools so only the wealthy can afford them. Jakarta was thought to be ideal for conducting the study, as it is a cultural melting pot. Students studying in the city were from different ethnic groups, religions and social & economic backgrounds, so to some extent this study may have accommodated plurality.

Participants of the study were students of senior secondary schools sitting in grade XI. Students in grade X were not selected because they were mostly 15 - 16 years old and still considered children; therefore, involving them as participants needed parental consent. Secondly, grade X was the first year of senior secondary school and the continuation of junior secondary school. The students may have been in the process of adjustment to new academic life. As such, students at grade XI were most ideal as they were already 16 years old, and some were 17. They had also been in the senior secondary level for more than one year, thus they had more experience in terms of academic life. This was likely to influence the interview that tapped the students' opinion of critical thinking and school subjects. On the other hand, students at grade XII were not selected because they were already busy preparing for the National Final Examination.

As mentioned, two private schools and two public schools were chosen. One class at private school A consisting of 15 students was used as a sample, and seven out of 15 students (46.66%) were interviewed. An additional 15 students in one class at private school B were also involved as participants with 10 students (66.66%) interviewed.

In the public schools, one class consisting of 22 students was used as a sample at public school A, and 10 students (45.45%) were interviewed. At public school B 23 students participated in the study and 10 (43.47%) were interviewed. Altogether, there were 75 participants and 75 answers. Each answer sheet covered nine critical

thinking questions; therefore, the study involved the analysis of 675 written responses. There were 37 total interview participants (49.33%).

Before the interview, all participants were informed of the purpose of the study to ask for their consent. They were also informed that the interview would be recorded and transcribed and the name of interviewees would remain anonymous. The study also obtained consent from the schools' principals to conduct research at their schools. The following table lists the profiles of participants.

Table 4.2 The profiles of participants

Table 4.2

No.	Profiles	Information
1	Grade of school	Senior secondary school students grade XI (the second year of high school)
2	Age span	16-17 years old
3	Private school A	15 participants; 7 interviewed (46.66%)
4	Private school B	15 participants; 10 interviewed (66.66%)
5	Public school A	22 participants; 10 interviewed (45.45%)
6	Public school B	23 participants; 10 interviewed (49.33)

4.4 Data collection and analysis methods

The three research methods adopted in the study were content analysis using a constructed analytical framework, a qualitative analysis of text-based responses and interviews. Content analysis was used to answer the first research question, and the other two strategies were applied to answer the second research question.

4.4.1 Content analysis

There are two approaches in content analysis: qualitative and quantitative. Several attempts have been made to define what qualitative content analysis is (Berg, 2007; Braun & Clark, 2012; Bryman, 2004; Krippendorff, 2004), and they propose the following in common: it is a systematic method to interpret texts or materials by identifying certain characteristics or patterns of meaning. With regard to quantitative content analysis some authors (Bryman, 2012; Denscombe, 2010; George, 2009) state that it deals more with quantifying the contents of texts or materials.

Several authors (Babbie, 2008; Bryman, 2012; Denscombe, 2010; Grbich, 2007) argue for the advantages of content analysis. They share similar ideas that texts contain information which has a particular intention. Since the data the texts provide is permanent, revealing the hidden meaning of the data - which is the objective of content analysis - can be a cost-effective, transparent and flexible method that can also be easily replicated.

To date, other methods such as discourse analysis, critical discourse analysis, or genre analysis have been used to elicit information from texts. Some authors (Irwin & Hramiak, 2010; Paltridge, 2006; Widdowson, 2007) argue that discourse analysis is concerned with the meaning produced by texts (spoken or written) and how the meaning is interpreted or perceived by the texts' receivers, while other authors (McCarthy, 1991; Woods, 2006) state similarly that discourse analysis deals with language and its context. Thus discourse analysis pertains to how language is displayed in texts and used in the contexts.

Critical discourse analysis (CDA), on the other hand, is interested in analysing identity (Rogers & Elias, 2012), analysing language used in the context of socio-political power and condition (Liasidou, 2008; Richardson, 2007; Widdowson, 2007), and analysing how texts depict social and political inequalities (Baxter, 2010; Jorgensen & Phillips, 2002; Wodak, 2011; Wooffitt, 2005). In short, Cots (2006) argues that CDA "attempts to reveal connections between language use,

power, and ideology” (p. 336) or analyse the “relationship of dominance, discrimination, power and control as manifested in language” (Wodak, 2001, p. 2).

Liu (2005) used CDA in an attempt to investigate how science and technology were constructed in Chinese textbooks and how the textbooks manifested their ideology that was different from the actual condition in the country. Another example of CDA is the study by Gavriely-Nuri (2014) which examined the speeches of Israeli’s prime ministers from 1982 to 2008 regarding their use of word ‘peace’ as a rhetorical propaganda device to legitimize war.

As mentioned, one of the present study’s objectives is to investigate whether English textbooks used by Indonesian senior secondary school students facilitated the teaching of critical thinking skills. To find the answer, text-based questions were analysed, as mentioned below. The questions were not analysed in terms of how they were related to the socio-political condition in Indonesia, identity or ideologies. Nor did the study connect the questions to the social or political power/dominance existing in the country, attempt to relate the questions with political and social imbalance, or unearth the hidden meaning of the questions regarding the powers in Indonesia. CDA was not adopted in this study. There was no desire to discover the manifestation of dominance, discrimination, power or control in the English textbooks. This study simply attempted to find the role of textbooks in the teaching-learning processes: whether text-based questions and tasks presented in the textbooks can promote and encourage Indonesian students’ critical thinking skills.

Furthermore, genre analysis, according to Bhatia (2008), is suitable for those interested in investigating the use and abuse of linguistic and rhetorical strategies, while other authors (Crossley, 2007; Tardy, 2011) argue that genre analysis studies a particular language used within specific discourse or culture. The specific discourse and culture is similar to the definition of genre proposed by Saviile-Troike (as cited in Swales, 1990), who argues that genre “refers to the *type* of communicative event” (p. 39) such as stories, jokes, lectures, greeting, etc. An example of genre analysis is the study by Pinto dos Santos (2002) which analysed the exchange of business letters in English between Brazilian and European

companies. Another example is the study by Clynes and Henry (2004) investigating the linguistic features of the Brunei Malay wedding invitation. In the study they looked at “students’ ability to identify formal genre elements (the moves and the lexico-grammatical and other features they contain), and their ability to explain the function of those formal elements, within the overall communicative purpose(s) of the genre” (p. 229).

Having considered the characteristics of discourse analysis and genre analysis, the present study can be considered to have a facet of those two research approaches. The study investigated Indonesian English textbooks which are a discourse, and it specifically focused on analysing text-based questions from all types of communicative events (poetry, short story, chart, article, play script, poster, etc.) found in those textbooks, which can be categorised as genres. As the present study in part had the characteristics of discourse and genre analysis, it also had an element of subjectivity, which was legitimate in those approaches.

Rejecting three methods to elicit information from texts, this study adopted content analysis. As mentioned, there are two kinds of content analysis in which the former attempts to unearth hidden meaning involving interpretation of a given text, while the latter “involves numeric values assigned to represent measured differences” (Riffe, Lacy & Fico, 2005, p. 30-31). Since this study adopted the combination between positivistic and constructivistic approaches, the study decided to interpret meaning of questions and tasks contained in Indonesian ELT textbooks and quantify the number of questions and tasks promoting and not promoting critical thinking skill.

With regard to data analysis, some authors (Altheide, 2004; Berg, 2007; Braun & Clark, 2012) share similar steps in conducting content analysis. The steps include generating a research question, generating analytic categories (sociological constructs) to guide data collection, searching the data for themes or categories, reviewing potential categories and producing the report.

On the subject of the abovementioned stages in undertaking the content analysis method, the study decided to carry out the following stages:

First, the study generated or identified a research question. As mentioned, the research question for the content analysis method posed in the present study was ‘Do Indonesian ELT textbooks facilitate the teaching of critical thinking skills?’

Second, analytic categories were constructed. The analytic categories had the role of providing a guide for collecting the data. Berg (2007) names analytic categories the *criteria of selection*. This study preferred to use the term ‘analytic categories.’ The methodology of constructing the analytic categories is explained in the subsection below.

Third, the unit of analysis was established. The study focused on ‘questions’ found in the textbooks. The term ‘questions’ here referred to all types of question and task. All types of question and task that followed after text types or graphic features (genre) such as articles, poems, leaflets, letters, short stories, advertisements, song lyrics, tables, charts, diagrams, cartoon, illustration, etc. were transcribed, analysed, coded, interpreted and reported.

Fourth, the analytic categories were piloted. This stage tested the instrument and attempted to find the difficulties encountered during the initial coding stage, the weaknesses of the categories and the possibility of revising the instrument for the main data collection stage. Many authors cite the importance of piloting the instrument in second language research (e.g. Griffiee, 2012; McKay, 2008; Nunan, 1992; Richards, 2003; Schoonen, 2011).

Fifth, the coding processes were conducted. Coding, according to Krippendorff (2004), is “transcribing, recording, or interpreting of given units of analysis into the terms of a data language so that they can be compared and analysed” (p. 220). In this stage, the study analysed and interpreted all questions and tasks provided in the textbooks as mentioned in the third stage. It connected the questions and tasks to the analytic categories and coded the information. In the coding stage, the study adopted hypothesis coding. This coding method seemed appropriate as it applied a research-generated list of codes. Saldana (2009) argues that:

Hypothesis coding is a research-generated, predetermined list of codes onto qualitative data specifically to assess a

researcher-generated hypothesis. The codes are developed from a theory/prediction about what will be found in the data before they have been collected or analysed. (p. 123)

Sixth, potential categories were reviewed. This, as proposed by Braun and Clark (2012), was the stage in which the study was open to emerging alternative categories. This stage was done together with the fifth stage. When there were questions that did not fall into the analytic categories but potentially encouraged critical thinking skills, the questions were recorded as new categories.

Finally, the findings were analysed and a report detailing them was produced. In this stage, the study analysed and interpreted the data, then reported them in the findings chapter (See Chapter 5 - findings.)

With regard to analytic categories in content analysis, Krippendorff and Bock (2009) argue “categories are intended to render the diversities of texts analysable while preserving the meanings that are relevant to a research question” (p. 267). The analytic categories in this study were constructed by evaluating, examining and synthesising 20 critical thinking taxonomies by Bloom and Freeman, critical thinking strategies proposed by researchers, critical thinking programmes designed by authorities and critical thinking tests designed by scholars (See Chapter 3.)

Two critical thinking taxonomies, Bloom’s and freeman’s taxonomies, were examined and evaluated. The results of their examination and evaluation were that they encourage questions or task probing *agreement, assumption, clarification, disagreement, evidence, perspective, prediction, reason, summary and viewpoint*.

Six empirical studies (Dantas-Whitney, 2002; Daud & Husin, 2004; Davidson & Dunham, 1997; Park, 2011; Shahini & Riazi, 2011; Yang & Gamble, 2013) on critical thinking in ELT (EFL/ESL/L2) have applied several strategies for promoting students’ critical thinking. The studies presented clear strategies, and the strategies showed that students’ critical thinking skills improved. The results of an evaluation and examination of the strategies were that they actually exposed students to explore *alternative, assumption, clarity, conclusion, disagreement, evidence, perspective, prediction, reason, reflection, summary and viewpoint*.

With reference to critical thinking programmes and taxonomies, the present study evaluated and examined nine of them. Philosophy for Children actually adopted Socratic questions, so it, together with the taxonomy of Socratic questions, was considered one programme. As such, there were eight final programmes that were analysed, evaluated and examined. As mentioned, several studies using the programmes have been conducted with positive results. Several programmes have been used in the educational sector to promote pupils' critical thinking skills such as: Cognitive Acceleration, Philosophy for Children, Taxonomy of Socratic Questions, Feuerstein's Instrumental Enrichment, Top Ten Thinking Tactics, De Bono's CoRT programme, Swartz and Park's Thinking Skills Taxonomy, Six Thinking Hats and Fisher's Story-Based Activities. The evaluation and examination of these critical thinking programmes produced several characteristics; they, in alphabetical order, were *agreement, alternative, assumption, clarity, conclusion, consequence, disagreement, evidence, implication, perspective, prediction, question, reason, summary, and viewpoint*.

Four critical thinking tests were evaluated and examined. They were Watson-Glaser Critical Thinking Appraisal, Ennis-Weir Critical Thinking Essay Test, The California Critical Thinking Disposition Inventory and The California Critical Thinking Skills Test. The examination showed similar results to the critical thinking strategies and programmes. The critical thinking tests explored the test takers' *agreement, assumption, evidence, clarity, conclusion, disagreement and reason*.

As mentioned, the study focused on all types of questions following all types of texts and graphic features as a unit of analysis. The key terms of the three critical thinking taxonomies were reorganised and some similar terms were combined. As the study was focused on text-based questions and tasks, the word 'questions' was added - imitating the taxonomy of Socratic questions proposed by Paul (1990) - to the analytic categories. As a result, the new critical thinking framework used to analyse the Indonesian English textbooks is as follows:

Table 4.3 The predetermined analytic categories for coding.

Table 4.3

1. Questions of clarification
2. Questions that probe assumptions
3. Questions that probe reasons and evidence
4. Questions about viewpoints or perspectives
5. Question that probe implication, consequences and alternatives
6. Questions about question
7. Questions about predictions
8. Question about agreement and disagreement
9. Questions about summary and conclusion

The analytic categories above may have reflected the researcher's subjectivity and required justification. Therefore, five teachers/lecturers in a doctoral programme at the University of York were asked their point of view regarding the categories. The study asked them for their response, in their capacity as a teacher or lecturer coming from different cultures and previous educational backgrounds (UK, South Korea, Malaysia and Indonesia), and included several examples of questions for each category (Paul, 1990). All of them stated that the categories could stimulate students' critical thinking, especially numbers two, three, four, five, six and seven.

'Questions for clarifications' basically asks students to clarify things (concepts, ideas, etc.) or asks them to give examples to make things clearer. As mentioned, this study adopted the 'third strand' of critical thinking to which Paul's concepts of critical thinking belong. Paul (1990) proposes some questions asking for clarification. For example, the question can ask students to explain the meaning of something (*What do you mean by...?*), to clarify their ideas (*What is your main point? Is your basic point...or...?*), to give an example to make things clearer (*Could you give me an example?*), or to explain things for clearer meaning (*Could you explain that further?*). Findings of this study showed variations of asking for

clarification. For example, the question asked students to clarify words' meaning (*What does 'evergreen' mean? What does the word 'cliché' mean?*), phrases' meaning (*What does the phrase 'some days deliver happiness' mean?*), sentences' meaning (*What is the meaning of the sentence "who says he wanted for?"*?) and poetic meaning (*What does the second stanza mean?*).

'Questions that probe assumption' asks what students assume. Though many critical thinking strategies, programmes and tests include 'assumption' as a critical thinking element as mentioned above, the study did not find it in Indonesian ELT textbooks (See Chapter 5 - Findings). Paul (1990) proposes some questions asking for assumption, for instance, *What are you assuming? What is Karen assuming? What could we assume instead? Why do you think the assumption holds here? or Why would someone make this assumption?*

'Questions that probe reasons and evidence' asks students to present reasons and evidence. Regarding this, Paul (1990) proposes some questions such as explaining reasons (*What are your reasons for saying that? Could you explain your reasons to us?*), questioning reasons and evidence (*Are these reasons adequate? But is that good evidence to believe that? Is there reason to doubt that evidence?*), or giving evidence (*Can someone else give evidence to support that response?*). The examples of this kind of question from the finding were asking students to give reasons behind the text writer's opinion (*What is the reason/argument behind it?*) and asking students to support their opinion with reasons (*Do you believe that poster is a useful medium to convey messages? Why?*).

'Questions about viewpoints or perspectives' asks students to present their personal opinion, viewpoint and perspective concerning things (e.g. ideas, concepts, etc.), or asks them to present somebody else's opinion/viewpoint, like the text writer. Paul (1990) proposes some questions about viewpoints or perspectives such as asking one's perspective (*You seem to be approaching this issue from ___ perspective. Why have you chosen this rather than that perspective?*), and asking different perspective (*Can/did anyone see this another way?*). Examples from the findings with regard to this were questions or tasks asking students to give their opinion (*Give your opinion on the following ideas: 1. City dwellers must use public*

transport. 2. The area of farm land should be reduced; What do you think we should do to drug dealers?; What is your view on the use of pesticides?).

‘Question that probe implication, consequences and alternatives’ asks students to present the implication or consequences of problems and propose alternative solutions or viewpoint concerning the problems. This also includes questions what one implies. With regard to this, Paul (1990) proposes some questions such as asking what one implies (*When you say ____, are you implying ____?*) and asking an alternative (*What is an alternative? Is there another way?*). Examples of findings of this study showed questions asking alternative solution (*Did Gecko find a solution to his problem? What was he supposed to do then? Can you suggest a better alternative to help them instead of taking the jobs you see in the pictures?*).

‘Questions about question’ basically asks students to talk about a question. This can be the importance of questions or the way to pose a different question. Paul (1990) proposes some questions about question, for instance, *Why is this question important? Can we break this question down at all? Is the question clear? Do we understand it? Is this question easy or hard to answer? Why? Do we all agree that this is the questions?* The pilot study found one question asking about question (see subsection 4.5 below) in one of Indonesian ELT textbooks; however, other textbooks did not contain this kind of question.

‘Questions about predictions’ asks students to predict what will happen. With regard to this, Paul (1990) proposes some questions asking students to think what happens next (*What do you think what happens next? What will it influence in the future?*) and to think what the writer predicts (*What does the writer predict?*). Findings from this study showed some variations, for example, *What is the further effect if we have poor development of agriculture? What did probably happen when the other bats knew how he got the fresh blood?*

‘Question about agreement and disagreement’ basically asks students to agree and disagree with things (e.g. ideas, concepts, etc.). This should be followed by a ‘why/why not’ question to encourage critical thinking. The examples from findings were *Do you agree with that? Why or Why not? Do you agree with them?*

‘Questions about summary and conclusion’ asks students to summarise or conclude information they have read. The study found some questions and tasks asking summary and conclusion, for example, *Sum up your comment and opinion* and *Summarise the story*.

4.4.2 Qualitative analysis of text-based responses

To answer the second research question, *How do Indonesian students respond to modified teaching materials containing the elements of critical thinking?*, the study decided to do a test. A reading section of one of the textbooks was chosen, and nine critical-thinking questions based on that passage were created. The critical-thinking questions created fully imitated the analytic categories above.

The reading text chosen was titled *Rainforests as Economic Reserves*. It was chosen because the topic could be explored to generate critical thinking questions. The original reading text was used; it was not modified at all. When testing the reading materials with Indonesian senior secondary school students, ten original questions were kept and labelled ‘Part A’ while the critical-thinking questions were named ‘Part B’ (See appendix 1.) As the test was conducted in ELT classroom and the reading materials were in English, students were also asked to respond in English. Besides this, it was in conjunction with this study which attempted to investigate critical thinking in ELT setting.

Students’ responses to the text were collected in the written form. Each response was analysed as to whether it answered the question. For example, question number one asked students to clarify what the text writer meant at a particular point. As the study analysed all of the students’ written responses to the text, this method has been called the ‘qualitative analysis of text-based responses.’

The test took one hour and was invigilated by the schoolteacher. It was intended that this would help to avoid students’ nervousness potentially caused by a stranger in the classroom. In completing the test, students were allowed to use dictionaries. As mentioned, there were in total 75 answer sheets. Each answer sheet contained at

least nine answers to nine modified questions, resulting in 675 answers/responses altogether. All student answers were transcribed and divided into four transcribing groups: private school A, private school B, public school A and public school B. Each answer sheet was analysed to see how Indonesian secondary school students responded to the questions (See chapter 6.)

Qualitative analysis of the text-based responses has been done by Urlaub (2012) when doing experimental research conducted in L2 setting (American students learning German) at the Language Center at Stanford University. The research investigated whether training in reading comprehension strategies with generating questions benefited the second language learners and improved their critical reading in second language literary texts. The research focused on the strategy of self-generating questions for the experimental group (n=14) and on a strategy similar to traditional teaching of L2 literature for the control group (n=7). Pre-tests, treatment and post-tests were applied and measured “the participants’ ability to provide a short critical response essay in their L1 (English) to a literary text that was read in their L2 (German)” (p.298). The test took one hour and the participants read the text and completed the writing task. Two raters were employed and inter-rater reliability was achieved (Cohen’s kappa coefficient, $K = 0.60$). The rating rubric ranged from 0 to 3. 0 indicated the essay was only a text summary, while 3 showed the writer’s interpretation providing a thoughtful analysis. Statistical data showed the experimental group’s training was more effective than the control group’s traditional training.

Rating rubrics (Osana & Seymour, 2004; Urlaub; 2012; Yang & Gamble, 2013) were developed to evaluate students’ critical thinking responses. Osana and Seymour’s coding rubric, developed on the basis of argumentation and reasoning literature, was used in the study to evaluate students’ argumentation and critical thinking. The rubric assessed students’ ability to distinguish between evidence quality and evidence type, to suspend judgment until receiving evidence, to use appropriate concepts of evidence and to recognize the importance of research. To evaluate students’ ability to distinguish between evidence quality and evidence type, for example, the rubric provided some pointers: A. quality of evidence (A1.

Research versus opinion; A2. Sample size; A3. Operationalizing construct); B. Type of evidence; C. Situational effects; D. Others. The rubric, however, did not instruct on how to mark the responses.

Urlaub's (2012) rating rubric was also designed to evaluate students' critical responses to a literary text. Urlaub (2012) stated that the rating rubric was "based on the Perry (1970, 1981) model for intellectual development in the late adolescent and on Bloom et al's (1956) taxonomy of educational objectives" (p. 300). The rating rubric ranged from 0 to 3 where a 0 indicated that the students' essay was only a summary or paraphrase of the text and its content and a score of 3 indicated that:

The essay is an interpretation that provides a thoughtful analysis of the text. Multiple perspectives are assumed, which are partly based on the student's original thoughts. The writer is also able to contrast these perspectives and shows commitment to his interpretation. Very few or no obvious misreadings occur. (p. 303)

Yang and Gamble (2013), who did an experimental study by designing a course for critical thinking-integrated EFL instruction, adopted the 'Holistic Critical Thinking Scoring Rubric (HCTSR)' from Facione & Facione to evaluate the elements of critical thinking in students' essays about global warming. Similar to Urlaub's rating rubric, HCTSR had four scoring criteria rated from 1 to 4. A 1 indicated a biased interpretation of the evidence, unwarranted claims and close-mindedness. A score of 4 showed that a student "accurately interprets evidence, identifies salient arguments, draws judicious conclusions, and fair-mindedly follows evidence" (p. 404).

The three rating rubrics above had one thing in common. They were used to evaluate students' critical thinking essays. Two of the rubrics (Urlaub and Young & Gamble's HCTSR) that provided scoring criteria seemed to fit the present study. Some elements of critical thinking, such as interpreting evidence (HCTSR), explaining reasons (HCTSR), explaining assumption (HCTSR), providing multiple perspectives (Urlaub) were found in the analytic categories. This study, therefore,

adopted principles of these two rubrics and modified the rubrics to create the coding rubric.

As mentioned, the present study intended to find Indonesian secondary school students' responses to nine questions developed from the stated analytic categories. To find the responses, the coding rubric of the study consisted of three rating categories: unacceptable, acceptable and good. The following table explains the criteria:

Table 4.4 The coding rubric for students' written responses.

Table 4.4

<p>Unacceptable:</p> <p>The response cannot be understood, or if it is understood, it does not answer what the question asks. Obvious misreadings occur.</p> <p>Acceptable:</p> <p>The response is understandable and able to answer what the question asks but lacks depth. The pupil shows little motivation or ability to support his/her answer. No original thought is found.</p> <p>Good:</p> <p>The response is clearly understandable and answers what the question asks in well-constructed sentences. The response is also supported by the pupil's original thoughts. The pupil shows motivation to expand his/her ideas.</p>
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4.4.3 Interview

There is a consensus among many scholars (Bell, 2005; Brewerton & Millward, 2001; Burton & Barlett, 2005; Cohen, Manion, & Morrison, 2007; Gillham, 2000; Merriam, 1988; Stake, 2010) that the interview is a fundamental and effective method to investigate people's mind, opinion, feeling, perception and interpretation of the world, especially when the researcher cannot observe their behaviour directly. For this study students were interviewed to gain insight into their opinions,

feelings and experiences regarding their study and aspects of critical thinking. In addition to this, the interview process might unveil more information relatively easily and directly from the interviewees.

Other methods to elicit information from participants are questionnaires or focus groups. A questionnaire could have been administered as part of this research, but it would have been difficult to ask for more explanation when finding unclear responses. The interview conducted was related to the modified reading materials and conducted right after the participants were finished with the written test, so they still remembered the subject of the test. If the study had given students a questionnaire, the results may have been inaccurate as students could have been bored and tired after doing a one-hour written test. Besides this, an interview allowed the researcher to follow up questions, where a questionnaire did not.

The study also could have used a focus group, but it was decided against this, given that a focus group relies on an interactive group discussion on a topic given by a researcher (Gibbs, 2012; Cohen, Manion, & Morrison, 2007) and that Indonesian students are unused to interacting with each other by sharing feelings; a focus group discussion could easily have caused discomfort among the students and a limit to the information gained. Moreover, the principle of in this study, semi-structured interviews were conducted. The purpose of adopting a semi-structured interview was to guide the interview process while avoiding the rigidity of a structured interview. Gibson and Brown (2009) argue that the semi-structured interview is “much more common in qualitative research than the more rigidly structured forms precisely because the iterative nature of the data generation and analysis fits well with the overall aims of qualitative enquiry” (p. 89). This qualitative research required a semi-structured interview because the researcher would have the guideline of the interview while at the same time could develop the questions. On the other hand, this study did not adopt unstructured interviews because, without pre-arranged questions and agenda (see Clark-Carter, 2004) topic, focus may have been lost.

Interviews were conducted in the Indonesian language in order to avoid language barriers, make students more comfortable and receive better responses. There were

four main questions asked to the students related to the second research question posed in this study. The first question asked whether the modified reading materials encouraged students to think. When the response was positive, students were asked to mention which questions most encouraged them to think. The next question asked whether they found difficulty in answering the questions. If the response was 'yes', they were asked to point out the most difficult questions. Finally, the participants were asked to comment on whether they were given a chance or asked to think, opine, comment and argue in any other school subjects (See appendix 2.)

Apart from the content of interview data, there are some other issues with regard to this method. These issues, according to Block (2000), have not been widely touched on as he argues that "...researchers tend to focus on the content of the words produced by research participants" (p. 757). Therefore, there follows a brief discussion of other issues in interviews: power, gender and the status of interview data.

Block (2000) has not explicitly explained the first issue, related to power. His work serves to remind researchers that "interviewees might adopt different roles in response to their perception of being positioned in particular ways by particular questions" (p. 760). It can be inferred that what Block means by power may be related to the position of the interviewer, who is more powerful than interviewees, so the data obtained might not be the real expression of the interviewee's feelings. Responding to Block, the interview was conducted in a relaxed atmosphere. It was done in the corner of the classroom where not only an interviewee but also other students were present, without the presence of a schoolteacher. The purpose of doing interview in the corner of the classroom was not to make the interviewee feel intimidated as he/she was not alone. The interviews, which lasted for 10-20 minutes with each participant, were conducted immediately after completion of the written test. Each interview began with an introduction of the researcher and purpose of the study. Besides this, the interview started with small talk; the interviewer asked the students' hobbies, address, etc. in a friendly manner to ease their nerves. The participants were informed of the treatment of the recordings before signing the

consent. They were also informed that their names would not be revealed. This was expected to solve the issue of power.

The study attempted to keep a balanced number between male and female participants. However, in public school A, the number of female pupils interviewed was greater than the number of male students. This was because many of the male pupils had an extracurricular activity immediately following the test. In the Indonesian educational system, there is no separation between male and female students in the classroom. Nor is there separation in teaching-learning processes; male teachers are not specifically for male students, as happens in some Islamic countries in the Middle East.

The final issue concerned the status of interview data. As mentioned, this study attempted to find whether Indonesian ELT textbooks facilitate the teaching of critical thinking and to find how Indonesian students respond to critical thinking questions derived from critical thinking categories. Interview data in this study were used as supplementary data to support the analysis of students' written responses to critical thinking questions and the content analysis of the Indonesian English textbooks. The results of interview were also used to see whether Indonesian students were actually willing to receive the teaching of critical thinking skills since critical thinking has been incorporated in the country's education objectives. The interview data in this study were therefore used to support other data collection instruments. If interview data are used to support other data collection instruments, as in this study, Mann (2010) states "it could be argued that such mixed-methods research should not reasonably be expected to live up to the same level of expectations with regard to the issues raised above" (p. 13).

4.5 Pilot study

4.5.1 Content analysis

The pilot study for the content analysis was conducted in June 2013. The main objective of the pilot study was testing the analytic categories. The textbook used

for the pilot study was *Developing English Competencies - Grade X*. The book was chosen as most schools in Jakarta use it, and grade X was the first level of senior secondary school. The book seemed to be a 'bridge' for the transition between the junior secondary level and the senior secondary stage. As the book was the beginning level for senior secondary students, it may have also been the easiest English textbook in terms of grammar and vocabulary.

Firstly, the context within which the documents were generated was established (Altheide, 2004), following which it was noted that each of the six chapters in the book presented a different topic and provided four language skills: listening, speaking, reading and writing. The book adopted a topic-based syllabus. Reading activities, however, were found not only in the reading section but also in three other sections.

One of the stages of conducting content analysis was determining the systematic criteria of selection for sorting data chunks into analytic categories (Berg, 2007). Since the study was focused on questions, all reading-based activities found in all skill units (listening, reading, writing, speaking) were analysed. Also, the study did not focus on a certain text type or text form in piloting the analytic categories. All text types, text forms and graphic features were analysed as long as they were followed by questions. According to Hughes (2003), text types include articles, poems/verses, encyclopaedia entries, leaflets, letters, diary, advertisements, etc. and text forms include descriptions, expositions, argumentation, narration etc. Graphic features cover tables, charts, diagrams, cartoons and illustration.

On the subject of exercising the analytic categories, there was no difficulty found. The categories were effective to find possible questions that potentially facilitated critical thinking skills.

The pilot study found out that, in general, there were two kinds of questions, open questions and closed questions. Open questions allowed students to respond in sentences, and were mostly Wh-questions. Closed questions did not give much freedom of response, and the answers were mostly provided. This was similar to what Brookfield (2012) states "closed questions of a Yes/No, Right/Wrong nature

produce closed responses. Open questions yield a wide array of contribution” (p. 195-196). The types of closed questions found in the pilot study were multiple-choice, true/false, listing and matching information.

330 questions were found in the pilot study. They consisted of 260 open questions and 70 closed questions. There were 47 questions (14.24%) that could encourage critical thinking, and they were found in both closed and open question types. Of the 47 questions, 14 fell outside of the analytic categories already created. The example categories (themes) emerging from the textbook *Developing English Competencies – Grade X* are as follows:

Questions of clarification:

Multi-choice question: The word *well-known* in the first line means . . . (a. great b. weird c. special d. famous)

Multi-choice question: The word in the text that means *not too many* is . . . (a. rare b. sweet c. unique d. important)

Multiple-choice question: The marriage was really on the rock. The phrase on the rock means that the Beckhams marriage is in . . . condition (a. bad b. good c. strong d. happy e. strange)

Questions that probe reasons:

Open question: Provide reasons why you choose the options as the ending of the story.

Open question: Why did the fox praise the voice of the crow?

Open question: Do the texts have a similarity in their structure? Explain your answer.

Questions about viewpoint and perspectives:

Open question: What is the moral of the story?

Open question: What do you think of this place?

Open question: In your opinion, which one is the most amazing, scenery of mountain or beach?

Open question: How is Luna feeling for Andhika? Do you think she likes him?

Question that probe consequences and alternatives:

Multi-choice: Decide how the story ends based on the following options: (a. Beowulf killed Grendel and took the treasure b. Beowulf killed Grendel but he died c. Grendel killed Beowulf and escaped)

Open question: Do you have different expressions when showing your happiness in front of your friends and elderly people? If yes, what are the expressions?

Questions about the question:

Open question: Imagine that you hear surprising news. Ask five questions about it. What? Who? Where? When? How?

Question about prediction:

Open question: Can you predict what the story about?

There were other questions that seemed to have the potential to encourage critical thinking and which did not fall into the analytic categories. The three sentences below may have made the student read all sentences and make a connection between them. Students may need to analyse the sentences to answer the questions. Therefore, this category was named ‘analysis.’

Questions about analysis:

Open question: What are the topics of the two texts?

Open question: What is the topic sentence of the first paragraph?

Open question: What is the topic sentence of the third paragraph?

Other questions found in chapter five, activity nine were closed and asked students to find the synonyms for 10 words in the text titled ‘Paris.’ The complete instructions and questions are as follows:

Find the synonym of the following words in the text. Then write your own sentences based on these words: 1. dense 2. beautiful 3. annually 4. very large 5. attract 6. visit 7. popular 8. famous 9. largest 10. symbol – (p. 126)

In order to answer those 10 synonym questions, students had to do an analysis process as mentioned above. After that, they were likely to interpret the context of the sentence to find which word could be substituted with the given word from the question. This process was considered in a category named ‘interpretation.’

Not all of the predetermined analytic categories emerged in the textbook. The most frequently emerging category was viewpoint/perspective. However, there were few questions facilitating critical thinking. As mentioned, 330 questions were analysed in this pilot study, and only 47 questions (14.24%) had the potential to promote critical thinking. The following table lists the categories, their numbers and percentages.

Table 4.5 The categories and their numbers & percentages

Table 4.5

Categories	Number	Percentage
Questions of clarification	5	10.63%
Questions that probe reasons and evidence	7	14.89%
Questions about viewpoints or perspective	17	36.17%
Questions that probe implications, consequences and alternatives	2	4.25%
Questions about the question	1	2.12%

Questions about predictions	1	2.12%
Questions about analysis (<i>outside the analytic categories</i>)	3	6.38%
Questions about interpretation (<i>outside the analytic categories</i>)	11	23.40%

To conclude, both closed and open questions contained the elements of critical thinking. The analytic categories proved to be efficient and effective in the pilot study as no difficult problem was encountered. Also, anticipating new categories or themes seemed effective. Therefore, the study decided to analyse closed and open questions and be alert to alternative categories in the main data collection process.

4.5.2 Materials implementation and interview

Similar to the pilot study for content analysis, the main objective of the pilot study to answer the second research question was evaluating test instruments to find any difficulties that may arise in conducting the main data collection. The pilot study was carried out in July, 2013 and lasted two days. One day was spent administering the test to students, and the other was spent interviewing them. The pilot study was done at a private school in Jakarta. One class with 11 students was used for the pilot study, and five students (45%) were interviewed randomly.

A reading passage from one of the textbooks was taken and modified by including elements of critical thinking adopted from the analytic categories. Test implementation progressed smoothly and there were no complaints from the students regarding the test materials. The reading test consisted of two parts (See appendix 1.) In part A, 10 questions from the original source were kept, and the questions representing the nine elements of critical thinking were added in part B. For the purpose of analysis, the study only focused on the questions in part B.

All answers from the 11 answer sheets were grouped into nine categories based on the analytic categories. For example, category one was a question for clarification, and category two was questions for assumption. Then, the study analysed the answers to find out whether the students were able to provide clarification, to assume, to give reasons and evidence, to express a viewpoint, to present consequences, to predict, to give reasons for their agreement or disagreement and to summarize or conclude. The pilot study paid more attention to the meaning of the students' answers than to their grammatical content.

The pilot study found that almost all of the students' responses were 'acceptable,' and a few were 'good'. It showed that the students were able to answer the questions containing elements of critical thinking even though most of their answers were still simple. For example, they were able to clarify, assume, reason, give a point of view, etc. at a basic level of critical thinking. The following are examples of the original students' responses without editing:

(1) Question for clarification: *What does the writer mean by "the planet's rainforests are placed under increasing threat of destruction" (paragraph 1 lines 5-6)?*

Responses:

It's mean rainforests are almost destroy. In fact, rainforests are essential to our life on earth.

The writer mean that because rainforest have a serious dilemma, rainforest are used for a number of economy purpose, ranging from agriculture to urban and industrial use. So rainforest are placed under increasing threat of destruction.

It means rainforests are used for a number of economic purposes. For example people destroy the rainforest for open access to the great places. The trees will be cut. Many medicines and drugs sold by local pharmacist come from plant that grow in rainforest. In fact nearly 40% of all medicines sold in chemist originate from rainforest. Not only medicines but also industrial products originate from the rainforest.

That means most of the rainforests are in endangered situation. This also means the amount of rainforests in the world are decreased drastically. Because of this, the economy also become unstable. This is because rainforest provides almost all human daily needs. If the rainforest become rare, of course it will affected world economy.

(2) Question that probes assumption: *What do you assume from paragraph 2?*

Responses:

My assume from paragraph 2 is rainforests are very useful for human survival because nearly 50 per cent of the world's food supplies originate in rainforest areas.

I assume that most food that we commonly see in the supermarket is originate in rainforest areas. Many popular food like rice, maize, etc also come from the rainforest.

I assume many food supplies originate in rainforest areas, such as bananas, pineapples, mangoes, peanuts, macadamia nuts, cashews, rice, corn, maize, tea, coffee. This make people's daily life fulfilled.

Rainforest provide a rich variety of the world's food supplies. Nearly 50 per cent of the world's food supplies originate in rainforest areas. Without the rainforest we will in trouble. We can't eat vegetables and fruits. Everybody will feel hungry and dead.

(3) Question that probes reasons and evidence: *What evidence does the writer use to say that "rainforests provide many products used by the community for urban development"?*

Responses:

Many people who live in urban development use furniture from rainforest. They use wood from rainforest, and items that they commonly buy from the supermarket are come from rainforest.

The evidence is "These include timber converted into building materials for house framing, furniture, fencing, panel products and flooring. Rainforests also supply wood."

The writer uses evidence that rainforest's product include timber that can be converted into building materials for house framing, furniture, fencing, panel products and flooring, toilet tissue and the pulp.

(4) Question about viewpoints or perspectives: *What is your opinion about "sustainable development"?*

Responses:

My opinion about 'sustainable development' is there needs to be a balance between the way we are currently using our rainforests and the future availability of these resources. We need to keep preserving rainforests so rainforests will be exist for the future. (good)

Sustainable development is very important thing to save our earth.

Sustainable development means we have to keep or take care of the rainforest for future needs too. If we don't, we will get foods crisis, medicines and drugs crisis, and also industrial and building products crisis.

My opinion about 'sustainable development' is very good because we have to think about the future too, so we will not lose the rainforest.

(5) Question that probes implications, consequences and alternatives: *What are the consequences if there is no more rainforest?*

Responses:

If there're no more rainforest, the world will be nothing more than a barren wasteland, the world will be very hot and very dry because there are no more plants in the world.

The consequences if there is no more rainforest our lives will be disrupted, food would be reduced and the economy of a country will be disrupted too.

We won't have enough foods, medicines, materials for industrial use.

The consequences if there is no more rainforest, it will be global warming and there are no animals for life.

Many natural disaster will occur, starvation in all over the world. The world will be in chaos because the foods become very expensive. The world will be polluted because there are no rainforest will absorb the gas in the air and turn it into oxygen. Many new disease are founded with no cure. (good)

(6) Question about the question: *What does question number 5 ask you to do?*

Responses:

Question number 5 ask me to give the consequences if there is no more rainforest by my opinion.

Number 5 ask me to answer the consequences if there is no more rainforest.

To answer the question according to my opinion.

The question number 5 asks us to preserve rainforest.

Number 5 asked me to preserve the rainforest if we want to use the product.

(7) Question that probes prediction: *What do you predict if sustainable development is not applied?*

Responses:

It will be danger. We don't have food supplies. We can't make furniture from wood, so will die slowly. And for animal, they don't have place to live.

I predict that if sustainable development is not applied, in the future we won't have any rainforest again, and starvation will occur in many parts of the world.

If sustainable development is not applied, the rainforests will be extinct and our next generation can't use rainforest's products.

We can't get enough food and global warming and then many people will dead.

The world will become a desert sooner or later because the rainforest is no more.

(8) Question that probes agreement and disagreement: *Do you agree with the writer? Why?*

Responses:

Yes, because most of our life needs are provided by the rainforest, therefore we must preserve the rainforest.

Yes, I'm agree because the writer is right. The rainforests are very crucial to support many aspects of life, it is our duty to preserve them.

Yes, I agree with writer because it is our duty to preserve rainforest, because in fact rainforests are very crucial to us.

Yes, I do because rainforest is very important for our life. So we need to keep preserving it. The writer make us to preserve it.

(9) Question that probes summary or conclusion: *What can you conclude from this passage?*

Responses:

My conclusion from this passage is rainforest very useful and must be preserved.

Human must preserve the rainforests, since it support our life in many different aspects.

To conclude, since the rainforests are very crucial to support many aspect of our life, it is our duty to preserve them.

Conclude of this passage is rainforest destruction is not good for our life.

We must preserve the rainforest in order to keep the world from the destruction and crisis.

The responses from the students concerning the modified questions with the elements of critical thinking uncovered a few themes. First, the students had the ability to express a point of view, predict, clarify, reason, summarize and other critical thinking skills. Second, they seemed to have no problem in answering such questions. Third, it also showed that adding more elements of critical thinking in a school textbook would be acceptable for the students.

The students' written responses were also supported by the results of the interviews. Five out of 11 students interviewed said that the questions made them think, and that thinking, along with expressing their opinion and creating an argument, was important for them. The following is the result of the interview and has been summarized and translated into English:

(1) Do you think the questions in part B (additional questions containing the elements of critical thinking) make you think?

Student 1: Yes

Student 2: Yes

Student 3: Yes because the questions ask our opinion, not finding the answer from the text.

Student 4: Yes

Student 5: Yes

(2) (If yes) which questions make you think?

Student 1: 1, 2, 5, 7

Student 2: 1, 4, 5, 6, 7, 8, 9

Student 3: all

Student 4: all

Student 5: all

(3) Did you find any difficulty in answering the questions?

Student 1: yes

Student 2: yes

Student 3: no

Student 4: no

Student 5: yes

(4) (If yes) what difficulties did you find?

Student 1: I'm afraid my opinion is not exact.

Student 2: Sometimes I don't understand the vocabulary.

Student 3: -

Student 4: -

Student 5: Translate the sentences.

(5) What is your opinion if in any lesson you are asked to think?

Student 1: It is good because it will be useful at university. So far answers to questions can be found in the book, so I don't really think.

Student 2: It's important because it will train us to be critical.

Student 3: It's good because we can think broadly, not only see the textbook.

Student 4: It's important because it can increase our thinking ability.

Student 5: It's good because we can develop our mind.

The results of the interviews showed that all students agreed that the modified questions containing the elements of critical thinking adopted from the analytic categories made them think. They also said that almost all nine questions made them think or express their own opinions. Two out of the five students said they did not find any difficulty in answering the questions, while three students admitted that they had difficulty in answering the questions. However, their difficulty was only

related to vocabulary and comprehension as they had to answer the questions in English. One student said she was afraid that her answers would not be correct since they were only her personal opinion.

The last question that asked the students' opinion about thinking activities in any school subject prompted responses from all of them that thinking activities were important. They said that thinking activity could help them study at the university level, increase their thinking ability and develop their minds. One of them, student 2, even mentioned the word 'critical'.

The response from student 2 was surprising. As such, the researcher asked the school's English teacher whether the concept of critical thinking had been introduced in the school's teaching-learning processes. She said the concept was non-existent at the school. When asked how she taught English she informed that she sometimes modified activities from the textbook, made her own classroom activities and took additional materials from the Internet. Those activities, according to her, aimed to vary the textbook activities that were monotonous and boring without promoting critical thinking. The researcher assumed that the student came across the word 'critical' from his own reading habit since the word was already very familiar. It may be like the term 'critical thinking' in Indonesian education. Most teachers in Indonesia may have heard the term but haven't really understood what it is and how to apply it in their teaching activities.

To conclude, the pilot study found no difficulties regarding the test instruments and interview schedule so they were feasible for use in the main data collection to find students' responses on critical thinking questions. The findings in the pilot study showed that Indonesian students had the ability to perform activities asking them to think and express their own opinions and they seemed ready to accept the teaching of critical thinking, not only in English class but also in other school subjects.

4.6 Validity and reliability

With regard to the content analysis method, texts or documents are an inseparable part. Many authors (e.g. Bloor & Wood, 2006; Bryman, 2004; Denscombe, 2010) mention that sources such as personal documents, official documents from organizations or private sources, mass media output etc. can be used as sources of data. It is suggested, however, that the documents should not be accepted at face value (Denscombe, 2010). Therefore, the authors propose four criteria to find the validity of documentary sources: authenticity, credibility, representativeness and meaning.

Authenticity is defined by Bryman (2004) and Denscombe (2010) as genuine or real, while credibility means free from bias (Bloor & Wood, 2006; Bryman, 2004; Denscombe, 2010). The third criterion, representativeness, refers to whether the document “represents a typical instance of the thing it portrays” (Denscombe, 2010, p. 222), and, finally, the authors agree in defining meaning as unambiguous or clear.

The Indonesian ELT textbooks used in the study met the validity requirements of documentary data. As textbooks, they were real and clear as they were purposely designed for classroom activities to improve Indonesian students’ English mastery and have been used in Indonesian secondary schools for several years. The books have also been evaluated by the Book Commission of the Ministry of National Education of Indonesia and are approved to be used in teaching-learning processes, so they fulfilled the ‘representativeness’ criteria of documentary validity for the study. However, apart from the validity criteria proposed by the abovementioned authors, the textbooks are public documents whose contents could be interpreted by any reader. Furthermore, the study was entitled to, according to Krippendorff (2004), “decompose into meaningful units, recognise compelling structures, rearticulate my (reader) understandings sequentially or holistically, and act on them sensibly” (p. 30).

Validity, however, applies not only to documentary data but also the research itself. In connection with this, Krippendorff (2004) and Janis (2009) argue that research has to gauge what it intends to evaluate to produce valid results. To achieve

research validity, the study set analytic categories that were derived from critical thinking strategies, programmes, taxonomies and tests. In so doing, the study had been able to measure the proper elements; therefore, the study measured what it claimed to measure.

Another criterion for sound content analysis is reliability. Krippendorf (2004) proposes three types of reliability in this type of research method: stability, reproducibility and accuracy. For him, stability refers to an unchanging research process, and reproducibility means that other analysts can replicate the process. The term ‘accuracy’ is used by Krippendorf (2004) to refer to “the degree to which a process conforms to its specifications and yields what it is designed to yield” (p. 215). In short, Janis, Fadner, & Janowitz (as cited in Janis, 2009) argue that content analysis is reliable if it consistently yields the same results.

In order to achieve reliability, the coding processes always referred to the analytic categories, and the processes did not change throughout the study to meet stability. The analytic categories also enable different researchers to analyse the textbooks, so the study could be replicated to achieve similar results. Thus it fulfilled the criteria of reproducibility. As the analytic categories were derived from 20 critical thinking taxonomies, strategies, programmes and tests to categorize critical thinking questions, they could yield what the study intended; therefore, the criterion of accuracy could be achieved. However, in analysing the textbooks, the study was also open to any emerging category that did not fit into the predetermined options. There were actually two categories that fell out of the predetermined categories that emerged in both the pilot study and main data collection (See Chapter 5 – findings.)

The reliability for testing instruments (modified reading activity and the questions for interview) was obtained with the assistance of five Indonesian English teachers. The aim was to find their perception of whether ‘modified reading activity - part B’ could promote students to think and whether the interview questions could elicit students’ perceptions concerning critical thinking. The five teachers said that the modified materials could encourage students to think critically and that the questions for interview could elicit information on students’ viewpoints. One of the English teachers, who is taking a graduate course in English education, said, “This

kind of question absolutely demands test takers to answer by thinking critically. The passage doesn't provide direct answers so that the test takers should interpret the text. The questions are good and will train them to develop their critical thinking. So far, this kind of questions (sic) is very rarely used in teaching and learning. By this kind of question, students will experience more deeply in exploring their mind.”

4.7 Analysis triangulation

Gibson and Brown (2009) argue “triangulation can be useful for checking the trustworthiness of different sources of data (e.g. how accurate a data source is) or for examining the same phenomenon from different points of view” (p. 59). This study took two steps to address this: three English teaching professionals were asked to check a sample of coding done by the researcher and three English teaching professionals were asked to code a few sample pages.

The three English professionals (two university lecturers and one ELT practitioner) checked a sample of the researcher's coding. They said that the questions which had been developed based on the analytic categories could promote students' critical thinking skills, and that the steps for coding the students' responses were adequate. However, one English lecturer said that some answers from the students were somewhat unsatisfactory. She assumed that this may have been related to students' limited English vocabulary. In fact, her assumption was similar to the interview results, which showed that some students had a problem with their limited English vocabulary.

With reference to the second step, three other ELT professionals were asked to code sample pages. They did the coding for open questions found in Chapter 1 and Chapter 2 (page 1-50) of *Developing English Competencies* for grade XI using the analytic categories the study generated. The results showed that their codes were similar to those of the researcher.

Chapter 5: Critical thinking activities in Indonesian ELT textbooks - Findings and discussion

5.1 Introduction

Chapter four elaborated upon methods and approaches used to empirically investigate the research questions. In this chapter, the findings of the data-gathering stage are presented and discussed. The data collection processes and analysis were conducted with regard to the first research question posed in this thesis:

Do Indonesian ELT textbooks facilitate the teaching of critical thinking skills?

Inherent in the research question is the assumption that Indonesian ELT textbooks do not facilitate students' critical thinking as Indonesian students have not been widely exposed to critical thinking skills (Samanhudi, 2011; Wulandari, Sjarkawi, & Damris, 2011), and studies on critical thinking and Indonesian English textbooks have never been conducted.

This chapter is divided into ten sections. The first section introduces the chapter. The second section presents the types of questions found in the textbooks. The third section addresses the textually-explicit questions mostly found in the textbooks. The fourth section presents elements of analytic categories found in the open questions, followed by section five, which discusses the elements of analytic categories found in the closed questions. The sixth section presents the categories that emerge outside of the predetermined analytic categories. The seventh section discusses the critical thinking categories constructed in the methodology chapter. This research shows that the categories do not always work well in determining critical thinking questions, so clear criteria need to be established in future investigations of critical thinking. The eighth section details the role of the literature in promoting critical thinking in ESOL (English to Speakers of Other Languages). The ninth section discusses textbooks and critical thinking skills. As the textbooks do not aim to build critical thinking skills, further work on developing teaching materials for both promoting language proficiency and building critical thinking skills is

recommended. The chapter ends with a section discussing the authors of textbooks who may be unaware of the critical thinking input they are providing.

5.2 Types of questions found in the textbooks

There were roughly 2,194 questions in the nine textbooks from two different titles or series: *Interlanguage* and *Developing English Competencies*. As mentioned, ‘questions’ here refers to all types of questions and tasks that follow text types or graphic features (genre) such as articles, poems, leaflets, letters, short stories, advertisements, song lyrics, play scripts, tables, charts, diagrams, cartoons, illustrations, posters, etc. Based on findings, those questions were categorised into two parts: closed questions (554 questions) and open questions (1,640 questions). While open questions were Wh-questions or Yes/No questions followed by Wh-questions, closed questions were questions whose answers were mostly provided with lists of potential answers. Open questions offered various responses. On the other hand, closed questions offered closed responses, and closed questions found in the textbooks consisted of several types: true/false identification (TF), listing information (LI), multi-choice (MC), matching task (MT) and sentence completion (SC). All five types of closed questions and open questions found in the textbooks can be seen in the table and figure below:

Table 5.1 The number of question types contained in the textbooks

Table 5.1

Types of questions	Number of questions	Percentage
True/False identification	142	6.472%
Listing information	90	4.102%
Multi-choice	145	6.608%
Matching task	122	5.560%
Sentence completion	55	2.506%
Open questions	1,640	74.749%
Total	2,194	100%

Figure 5.1 Column chart of the number of question types contained in the textbooks

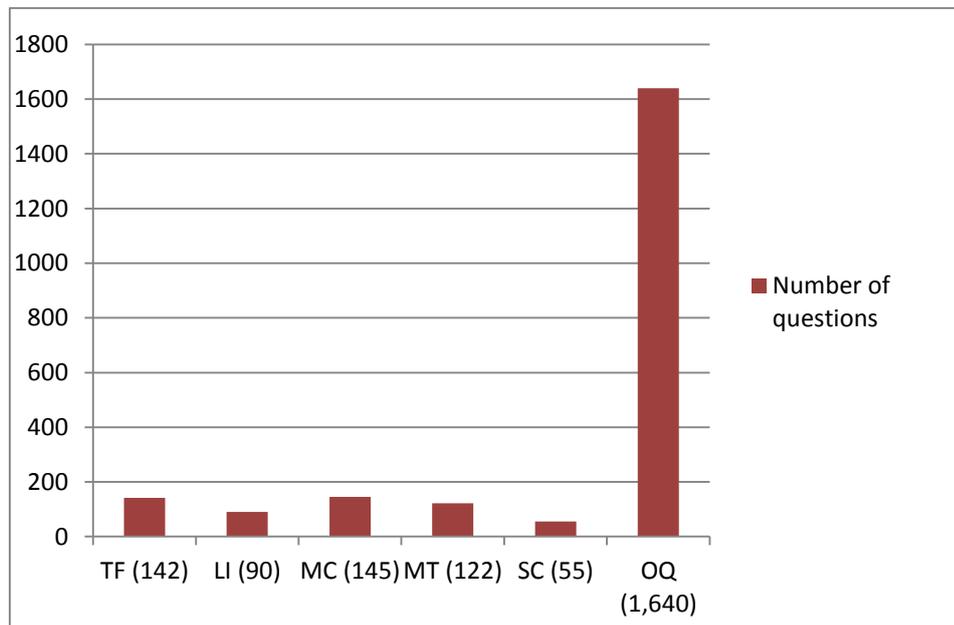


Figure 5.1

5.3 Textually-explicit questions

The results to emerge from the data show that most of the types of questions mentioned above were what Pearson and Johnson (as cited in Freeman, 2014) referred to as ‘textually explicit.’ Textually-explicit questions mean that “the answer to the question can be found stated directly in the text” (Freeman, 2014, p. 83). In some chapters or units of the textbooks, there were questions whose answers could be spotted very easily. For example, there was a text with the name of author written under its title. The text was followed by questions, one of which asked students the name of the text’s writer.

With reference to explicit questions in TF, students were asked to identify whether a question was true or false. Sometimes a correction column accompanied the activity. This may be provided for a ‘false’ response in which students were expected to write the correct one. Two examples of TF questions are presented below, and more examples can be seen in Appendix 3.

(1)

Textbook: Interlanguage – grade X unit 1 task 12 (p. 9-10)

Text: I joined the Traditional Dance Competition in Jakarta last year. I represented my Junior High school.

Question: The writer joined the competition when she was in the Junior High School.
(True/False)

(2)

Textbook: Interlanguage for science and social study programme – grade XI unit 7 task 8 (p. 126)

Text: (A dialog between Virga and Denia)

Virga: Hi, Denias. You look so happy.

Denias: Hi, Virga. Yes, I'm very happy. My parents plan to establish an organic husbandry. We will produce organic milk.

Question: Denias's parents plan to establish organic husbandry. (True/False)

The two questions above were very easy to answer. Question number 1, for example, clearly indicated that 'the writer joined the competition when she was in the Junior High School.' Question number 2 was similar; it provided an explicit answer to the question. The words used as the question were even a repetition of the text. Students could easily guess that the answer was true.

Referring to LI questions, students were asked to write information that had been explicitly presented in the text. Two examples of LI question are presented below; several more examples can be found in Appendix 3. In question number 3, for example, students were asked to describe Emma Watson's - an English actress - physical appearance and list her 'characters' (sic). Information about her appearance and characteristics was written explicitly in the text.

(3)

Textbook: Interlanguage – grade X unit 7 task 12 (p. 120-122)

Text: Emma Charlotte Duerre Watson was born in Paris, France, 15 April 1990. Her nickname is Emma. She is the daughter of Chris Watson and Jacqueline Luesby. She lived in Paris until the age of five before she moved with her mother and younger brother Alexander to Oxford, England. Emma has wavy brown hair. Her height is 165 cm. She is a generous, friendly, and determined person. She also said that she is a little bit stubborn. Emma loves dancing, singing, tennis and art.

Question: (Write down) Emma Watson's physical appearance and characters.

Another variation of an LI question was completing a table with information from a text. Similar to the example above, the information was explicit and the question asked students to move information from the text to the table, as can be seen in the following excerpt:

(4)

Textbook: Developing English competencies for natural and social science programmes – grade XII chapter 1 activity 10 (p. 18)

Text: Book fair sale dates are on Saturday, November 19, from 10 am to 6 pm and Sunday, November 20, from 11 am to 6 pm – Buy new books at half price and help thousands of kids, senior citizens and homeless people live better lives at the 19th Annual Book Fair to Benefit Goddard Riverside Community Centre at Hibiscus Building, 213 Frangipani Street. For more information call 212 873 4448.

Question: Read the advertisement and complete the table using information from it. (The table consisted of event, time/date/venue, purpose of the action and phone number of the organizer)

Regarding MC, this type of question asked students to choose from one of the choices provided. Three examples are presented below, and more examples can be seen in Appendix 3. Many questions of this type were textually-explicit questions. One of the choices provided was actually stated in the text, as can be seen in the example 5 below:

(5)

Textbook: Interlanguage – grade X unit 1 task 22 (p. 15-16)

Text: When I was a boy, I liked swimming very much. Each year my two brothers and I spent the holiday with our uncle and aunt in their house by the sea. It was only twenty yards from the water.

Question: Read the text and then choose the right statements by circling the letter a, b, c, or d. Question number 1: (a) The boys' home was near the sea; (b) The boys' uncle's home was near the sea; (c) the boys' uncle's home was a long way from the water; (d) The boys' home was a long way from the sea.

The text clearly stated that the boy's uncle and aunt's house was by the sea; therefore, it would be very easy for students to select the answer b. A similar thing was also found in the example below in which the information was explicitly stated in the text, meaning students did not have to think critically to select the correct answers.

(6)

Textbook: Interlanguage for science and social study programmes – grade XI unit 1 task 12 (p. 9)

Text: There is a holiday called Labour Thanksgiving Day (Kinrô kansha no hi) in Japan. It is a national holiday in Japan and it takes place annually on November 23. It is held as an occasion for commemorating labour and production and giving one another thanks.

Question: Choose the correct answer to every question below based on the text in Task 11.

1. What is the information about? (a) Labour Day; (b) Labour Thanksgiving Day; (c) Thanksgiving Day; (d) Niiname-sai; (e) Japanese national holidays.
2. When is it held? (a) October 24; (b) October 23; (c) November 13; (d) November 23; (e) November 24.

A few questions found in the textbooks even offered an ambiguous answer, such as that written in example 7. The text did not mention who participated in the show, but a question was asked about the participants.

(7)

Textbook: Developing English competencies for language programme – grade XI chapter 5 activity 11 (p.100)

Text: Read the following script of a show presenter (host) – Welcome, my name is Siti Haliza and I will be your host tonight. I want to thank you for taking time out of your busy day to participate in our Night of the Notables. Tonight you will have an opportunity to meet many famous people and ask them about their lives. We've worked hard..... Each of you should have picked up a numbered, *Guess Who??* sheet like this (show sheet). In just a moment, our notables will be arriving. Each notable will have a number attached to their clothing. You will be given a chance to interview the notables. It is your job to try to figure out who they are by using the interview questions on the back of the sheet. You are not allowed to ask them their notable names. We will warn you when you have 5 minutes remaining. You probably will not have a chance to interview all 50 notables. It is time to have fun. Let's begin.

Question: Answer these questions by choosing a, b or c for the correct answer. (question number 2 and 4 are taken as an example)

2. Who are the participants of the show? (a) Students; (b) Parents; (c) Students and parents
4. How many notables are there to be interviewed? (a) 40 notables; (b) 45 notables; (c) 50 notables

MT questions asked students to match a question with its corresponding answer.

One activity from the *Developing English Competencies* for language programme grade XI presented explicit questions. In the activity, students were asked to match slogans and their corresponding advertisements as shown below:

(8)

Textbook: Developing English competencies for language programme – grade XI chapter 1 activity 8 (p. 16-17)

Text: Two slogans are presented: "Come abroad with us" and "Use a razor for a closer shave."

Question: Match the slogans in Activity 7 with the following advertisements:

1. Much safer and comfortable if you use it. *New Horizon* We give you the best quality (with the picture of razor).
2. We come to your district. No need to go to Bali to find tickets. We have a branch office in Ubud. We're happy if you're satisfied: Phone (0361) 204576 (with the picture of airplane).

When exposed to this activity, it would be very easy for students to match the picture of ‘razor’ with the slogan “use a razor for a closer shave” rather than the other slogan.

Respecting SC, there were two kinds of questions found in the textbooks: filling in missing information and completing sentences by filling in the gaps/blanks. The questions were only found in the *Interlanguage* series, with the other series not containing this type of question.

These kinds of question seem ideal to promote critical thinking skills; however, some questions still presented explicit answers. Example number 9 below, for instance, only asked students to complete a sentence where the answer could be easily spotted in the text.

(9)

Textbook: *Interlanguage for language study programme – grade XI unit 8 task 14* (p. 150)

Text: (The text titled “No Charge for Love” was about a boy who preferred buying an invalid dog to a normal dog) - With tears in his eyes, the farmer reached down and picked up the little pup. Holding it carefully he handed it to the little boy. “How much?” asked the little boy. “No charge,” answered the farmer, “There’s no charge for love.”

Question: (one of 10 questions) The farmer said that...

Another variation of this question type, filling in the gap in sentences, also contained explicit questions. In example 10 below, students were asked to fill in the blanks with information from the text. The question, however, was a repetition of the text. Another example can be seen in Appendix 3.

(10)

Textbook: *Interlanguage for science and social study programmes – grade XI unit 5 task 12* (p. 83)

Text: One day, a Mama Ostrich returned home from gathering food for her two dear chicks. She looked and looked for them but could not find them anywhere. Imagine her alarm when she discovered lion tracks around her two-footed chicks’ tracks! Fearful but determined to find her babies, she followed the lion tracks. The tracks led into the woods and finally ended at the den of Mama Lion.

Question: Complete the sentences: (1) A Mama Ostrich returned home from (2) She could not find

Finally, open questions dominated the question types in the textbooks. As mentioned, there were 1,640 open questions found, contributing almost 75 percent of all questions analysed. Most open questions could also be categorised as textually-explicit questions that did not promote critical thinking skills. In reference to the scoring rubric generated in the methodology chapter, the answers to the textually-explicit questions did not ask students to propose their own ideas or original thoughts, as they did not give students the chance to explore their assumptions, reasons, agreements, predictions, alternatives, etc. Therefore, students' critical thinking skills could not be developed. The three examples below are open textually-explicit questions. Additional examples can be seen in Appendix 3.

(11)

Textbook: Interlanguage – Grade X unit 2 task 13 (p. 27-28)

Text: Last month my family and I went to Toraja to attend Grandpa's funeral. It was my first time to go to such a ceremony. We gathered there with our kin in the ceremony.

Question: When did the writer attend the funeral?

(12)

Textbook: Interlanguage for science and social study programmes – Grade XI unit 7 task 16 (p. 131)

Text: Organic farming is a form of agriculture which excludes the use of synthetic fertilizers and pesticides, plant growth regulators, livestock feed additives, and genetically modified organisms. It is believed that organic farming should replace conventional one for some reasons.

Question: What is organic farming?

(13)

Textbook: Developing English Competencies for language programme – Grade XI chapter 4 activity 5 (p. 77)

Text: (The text was the script of an MC) Good evening. Ladies and Gentlemen, a warm welcome to you all to this reception organised by Cross Cultural Organisation (CCO).

Question: Who organised the reception?

The three questions above do not challenge students to think critically. Question 3, for example, clearly mentions that the reception was organised by Cross Cultural Organisation. Reading the question, it would be very easy for students to find the answer.

The results of this study show that the Indonesian ELT textbooks examined were dominated by textually-explicit questions that provide answers that are clearly stated in a reading passage. Through a simple scanning activity, a student may be able to spot the answer easily, like numbers 1 and 2. This could promote students' reading comprehension; however, this does not really encourage their critical thinking skills as they are not asked to do activities belonging to the analytic categories used in this study, for example, clarifying meaning, presenting viewpoint, agreeing or disagreeing with the writer, predicting, proposing alternatives, presenting consequences, giving predictions, or drawing conclusions.

The current study found that textually-explicit questions existed in all types of questions in the textbooks. They were prevalent in open questions and closed questions such as true or false identification, listing information, multi-choice questions, matching tasks and sentence completion. In the 'listing information' questions, students were only asked to write information available in the reading text without being asked to, for instance, present their opinion concerning the content of the texts or express their agreement or disagreement to the content of the texts. Another example is the questions in the matching task activity in which students were asked to match pictures and slogans (example number 8). The two examples show that the former activity was simply copying information from the textbook to the students' notebook or activity sheet, while the latter was only checking the students' vocabulary knowledge. These activities appear to show very little critical thinking activity.

Open questions, the type of questions encouraging open responses (Brookfield, 2012) and with enormous potential to promote critical thinking skills (Shahini & Riazi, 2011), were not different from closed questions found in the textbooks. The results of the study also show that open questions were dominated by textually-explicit questions. Apart from the example numbers 11-13 above, there was also a sentence in a reading passage stating that ‘the female kangaroo has an external pouch on the front of her body.’ One of the questions asked where students could find the pouch of the female kangaroo. This explicit question does not encourage students’ critical thinking. The question may have been more challenging and have encouraged critical thinking skills if it asked students to think of and talk about alternative functions of the pouch of the female kangaroo, for example.

The successful promotion of students’ critical thinking skills must be done by presenting questions beyond textually-explicit questions. All critical thinking taxonomies, strategies, programmes and tests which have been examined, evaluated and became the analytic categories of this research also suggest this proposition. This can be found in most ‘sample verbs’ attached to Bloom’s taxonomy; also, this is presented in ‘lexical question types’ of Freeman’s taxonomy in which students were asked to guess the meaning of a word or phrase from the context, thus requiring them to make an assumption, one of the critical thinking’s analytic categories. With regard to critical thinking strategies, Daun and Husin’s strategy, for example, asked students to present the motive of characters in *Othello*. On the other hand, Park’s strategy asked students’ to determine texts’ propaganda and bias. Critical thinking programmes such as CA asked students to, among others, predict what will happen next and sum up ideas, while SPTST asked students to present different possibilities to reaching a solution. All these questions go beyond textually-explicit questions.

Similarly, a great deal of works (e.g. Abdel Halim, 2011; Commeyras, 1990; Correia, 2006; McDonald, 2004; Osana & Seymour, 2004; Swain, 2010; Urlaub, 2012; Yang & Gamble, 2013) that have used reading materials to promote students’ critical reading and thinking moved beyond the use of textually-explicit questions. McDonald, for example, used a children’s novel and introduced critical thinking

questions such as characterization from a different perspective, contrasting gendered characterization and alternative (feminist) discourse to 10-11-year-old students. On the other hand, Swain discussed the contents of magazines with a group of year-6 children by posing them questions regarding “authorial intent, the versions of childhood on offer, the role of image and language, how the text works to achieve a certain effect, what the author might expect you (the reader) to think or feel and the creation of alternative ‘readings’” (p. 133). Such questions have been proven to work well for secondary school children, and questions going beyond textually-explicit details are most likely to play a pivotal role in promoting students’ critical thinking skills, apart from the independent role of the teachers.

Textually-explicit questions, however, can be used as a basic stage to promote reading comprehension and understanding of the material, as they focus primarily on the content of texts. However, deep understanding would improve when learners relate the content as new information with their prior knowledge (McNamara, 2010) and experiences. Simply connecting the content to prior knowledge and experiences is not enough. Learners need to ask more challenging questions. Concerning this, McNamara (2010) also goes on to say that:

Successful students ask *deep* how and why *questions*. They engage in active *inquiry* by searching for the answers to challenging questions and critically evaluating the quality of those answers. Active learners construct *explanations* and apply those explanations to difficult problems. Further, they consciously *reflect* on these cognitive activities. (p. 341-342)

McNamara’s academic judgment is similar to the term ‘close reading’ as used by Elder and Paul who recommend active participation in reading activities. Elder and Paul (2009) argue that “close reading requires active engagement in reading, (readers) create an inner dialogue with the text as they read - questioning, summarizing and connecting important ideas with other important ideas” (p. 290).

McNamara and Elder & Paul’s arguments support the idea that presenting only textually-explicit questions is not enough to encourage students’ critical thinking

skills, as they do not promote questions that force the learner to go more deeply into the content. This is also because these kinds of question do not move from what the content explicitly states. It can be claimed that textually-explicit questions treat a text simply as a text, not an object of criticism, or an object which learners can relate to real life, as literary criticism does. However, the abovementioned studies treated textually-explicit questions as a stepping-stone to the critical thinking stage and suggested that there is a gradual progress to facilitating students' critical thinking skills.

The current study found that the majority of questions contained in Indonesian ELT textbooks were textually-explicit questions. However, as mentioned in the literature, promoting students' critical thinking needs to be done gradually, not suddenly. It can start from asking textually-explicit questions as an introductory activity to going beyond. It can therefore be assumed that most questions in the Indonesian ELT textbooks stand at the basic level of potentially paving the way for critical thinking activities.

5.4 Elements of analytic categories found in the open questions

As mentioned, the textbooks contained 1,640 open questions. Of these, 1,403 questions did not fall into the analytic categories; they were textually-explicit questions that did not seem to promote students' critical thinking skills. They could, however, be used as a basic stage before moving to critical thinking activities since studies suggests that teachers provide scaffold to facilitating students' critical thinking skills as discussed above.

The findings showed that 216 (13.17%) out of 1,640 open questions fell into the analytic categories, and 21 open questions fell outside of the existing categories. The 21 open questions falling outside the predetermined analytic categories are discussed in section 5.6 (Categories emerging outside the predetermined analytic categories).

The methodology constructed nine elements of predetermined analytic categories: questions of clarification, questions that probe assumptions, questions that probe reasons and evidence, questions about viewpoints or perspectives, questions that probe implications, consequences and alternatives, questions about the question, questions about prediction, questions about agreement and disagreement, and finally questions about summary and conclusion. Two categories were not found in the textbooks. They were questions that probe assumptions and questions about the question. However, questions about the question were found in the textbook used for the pilot study (See Chapter 4: Methodology of the study). The table and figures below describe the critical thinking categories found in the open questions.

Table 5.2 The analytic categories found in the open questions

Table 5.2

No	The Analytic Categories	Number	Percentage
1	Questions of clarification	23	10.648%
2	Questions that probe assumptions	-	-
3	Questions that probe reasons and evidence	24	11.111%
4	Questions about viewpoints or perspectives	139	64.351%
5	Questions that probe implications, consequences and alternatives	4	1.851%
6	Questions about the question	-	-
7	Questions about predictions	3	1.388%
8	Questions about agreement and disagreement	6	2.777%
9	Questions about summary and conclusion	17	7.870%
	Total	216	100%

Figure 5.2 Column chart of the analytic categories found in the open questions

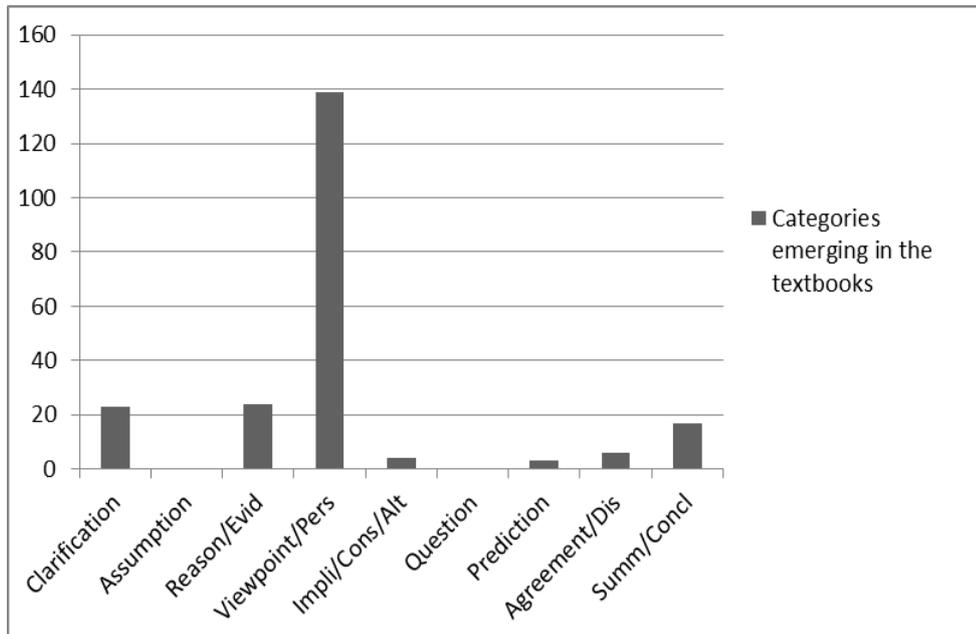


Figure 5.2

Figure 5.3 Pie chart of open questions falling into the analytic categories

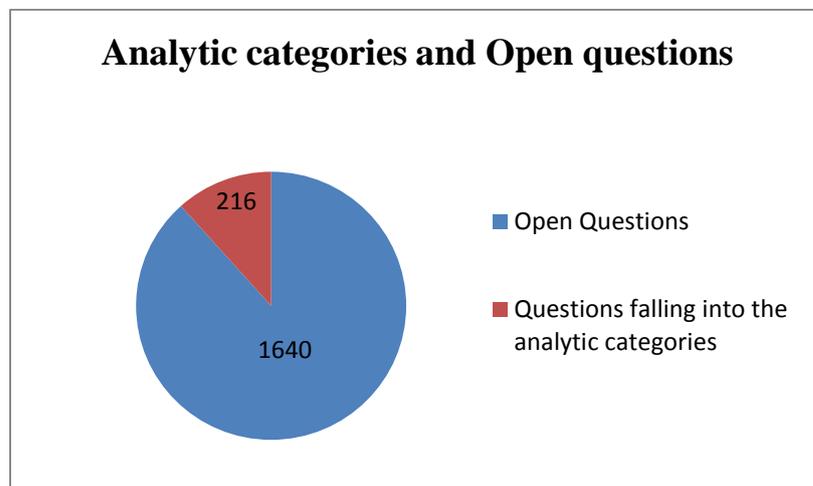


Figure 6.3

Open questions falling into the analytic categories were found in all of the textbooks. They ranged from questions requiring simple thinking processes such as those asking clarification to those questions involving deeper thinking skills. The elements of analytic categories and their examples are elaborated and discussed below.

The first analytic category was questions of clarification. Clarification was included as one of the criteria that may encourage critical thinking in almost all critical thinking tests, taxonomies (Bloom's taxonomy), programmes (e.g. Cognitive Acceleration; Cognitive Research Trust; Feuerstein's Instrumental Enrichment; Top Ten Thinking Tactics), and strategies (e.g. Daud & Husin, 2004; Davidson & Dunham, 1997; Paul, 1999; Shahini & Riazi, 2011). Clarification was also included as a language skill by the Department for Education (DfE), in the UK (Williams, 1998). Moore and Parker (2009) state that clarification is one of the critical thinking elements that should not be neglected. Another author, Chesters (2012), also argues that "students are required to engage in identification, *clarification*, and ordering in order to set an agenda for inquiry" (p. 163).

Questions of clarification appeared in some textbooks including *Interlanguage* for the language study programme in grade XI, *Interlanguage* for language study programme in grade XII, *Developing English Competencies* for natural and social science programmes grade XI, *Developing English Competencies* for language programme grade XI and *Developing English Competencies* for language programmes. Given that the literature has highlighted the importance of asking clarification as a means of encouraging students' critical thinking skills, it has not specified types of clarification questions. Also, prior studies proposing critical thinking strategies reviewed in the literature review chapter have not been able to confirm types of clarification questions. Findings of this research showed that in general, clarification questions could be divided into four types which could be applied to promote students' critical thinking skills; those types include word clarification (i), phrase clarification (ii), sentence clarification (iii), and poetic expression clarification (iv). These findings could be used by the teacher to create text-based activities. This could be an issue for future research to add more types of clarification questions promoting critical thinking.

i. Word clarification

Most questions of clarification that appear in the textbooks asked students to explain or clarify the meaning of words. Two examples of word clarification questions are presented below, and more can be seen in Appendix 4.

(1)

Textbook: Interlanguage for language study programme – grade XI unit 14 task 8 (p. 258)

Text: (The text was an Indonesian song lyric in English – paragraph 2)

“I’m the blood

I’m the key

You are evergreen who blessed in union

Let them born in to this world

Let them sing into the sky”

Question: What does ‘evergreen’ mean?

(2)

Textbook: Interlanguage for language study programme – grade XI unit 14 task 9 (p. 259)

Text: (The text was also an Indonesian song in English – paragraph 4)

“Something old, something new

Something I didn’t think could be true

Love is too strong and a bit cliché

For now this is enough, I’ve got a long way

Something old, something new

Something I didn’t think could be true

I’m afraid to ask but I need to know

Would you want me to stay? Or would you want me to go?”

Question: What does the word ‘cliché’ mean?

ii. Phrase/expression clarification

This kind of question asked students to clarify the meaning of phrases/expressions. There were slightly fewer phrase/expression-clarification questions than word-clarification questions. Examples of phrase-clarification questions can be seen in the two following excerpts:

(3)

Textbook: Interlanguage for language study programme – grade XII unit 12 task 10 (p. 245)

Text: (The text was a song lyric titled “My Heart will Go on” by Celine Dion – paragraph 4)

“Near, far, wherever you are
I believe that the heart does go on
Once more you open the door
And you're here in my heart
And my heart will go on and on”

Question: What does ‘the door’ means?

(4)

Textbook: Developing English Competencies for natural and social science programmes - grade XI chapter 6 activity 6 (p. 154)

Text: This, though, is the key conundrum for any and all parents. What is really the right choice of school for our children? In some quarters, mainly in the worlds of sales and commerce, the phrase "reassuringly expensive" is used to express the idea that the more you pay, the more likely you are to get something good.

Question: What is the meaning of the phrase "reassuringly expensive"?

iii. Sentence/clause clarification

Sentence/clause-clarification questions asked students to clarify the meaning of sentences or clauses. Similar to phrase clarification, the number of sentence/clause-clarification questions was small. Two examples of clarifying the meaning of sentences/clauses are provided below:

(5)

Textbook: Developing English competencies for natural and social science programmes – grade XI chapter 5 activity 5 (p. 122)

Text: (The text was a joke taken from Reader's Digest)

"You're 80 years old and your grandfather's still living? How old is he?"

"118."

"I suppose you're going to tell me he went turkey hunting this morning?"

"No. He got married."

The doctor looks at the man in amazement. "Got married? Why would a 118-year-old guy want to get married?"

The old-timer answers, "Who says he wanted to?"

Questions: What is the meaning of the sentence 'who says he wanted to'??

(6)

Textbook: Developing English competencies for natural and social science programmes – grade XI chapter 5 activity 5 – text 2 (p. 122)

Text: (The text, similar to number 1, was also a joke)

We brought our newborn son, Adam, to the paediatrician for his first checkup. As he finished, the doctor told us, "You have a cute baby."

Smiling, I said, "I bet you say that to all new parents."

"No," he replied, "Just to those whose babies really are good-looking."

"So what do you say to the others?" I asked.

"He looks just like you."

Question: What did the paediatrician mean by saying 'he looks just like you' to the new parents?

iv. Poetic expression clarification

Textbooks for language programmes provided literary works such as short stories, poems, play scripts and song lyrics. Even though there were not many questions facilitating students' critical thinking, the number of critical thinking questions in

the textbooks for the language programmes was slightly above those of other textbooks.

Poetic expression-clarification questions appeared after literary texts. Students were asked to explain or clarify the meaning of poetic expressions. Two examples of poetic expression-clarification questions are given below. Additional examples can be found in Appendix 4.

(7)

Textbook: Developing English competencies for language programme – grade XII chapter 8 activity 5 (p. 170)

Text: (The text was a poem by Edna St. Vincent Millay)

“...
Silver bark of beech, and sallow
Bark of yellow birch and yellow
Twig of willow
Stripe of green in moose wood maple,
Color seen in leaf apple
Bark of popple
Wood of people pale as moonbeam,
Wood of oak of yoke and barn-beam,
Wood of hornbeam.
Silver bark of beach, and hollow
Stem of elder, tall and yellow
Twig of yellow”

Question: What does the line ‘wood people pale as moonbeam’ mean?

(8)

Textbook: Developing English competencies for language programme – grade XII chapter 8 activity 8 (p. 181)

Text: (The text was a song lyric titled “Goodbye My Lover” by James Blunt – paragraph 3)

“You touched my heart you touched my soul.

You changed my life and all my goals.

And love is blind and that I knew when,

My heart was blinded by you.”

Question: What does the line ‘you touched my heart you touched my soul’ mean?

The findings of poetic expression clarification questions confirm the literature (Fisher, 2008) and support Philosophy for Children (P4C) critical thinking programme that literary works can be used to encourage students’ critical thinking skills. This is discussed further in section 5.8 (Critical thinking, literature and ESOL) below.

The next analytic category was questions that probe assumption. Halpern (2014) argues that assumption is a “statement for which no proof or evidence is offered...Assumptions are important components in argument, and they are the most forgotten part because they are often omitted” (p. 237). Other authors (e.g. Chaffee, 2012; Johnston, Mitchell, Myles, & Ford, 2011; Tittle, 2011) also state that asking for an assumption is suitable to encourage critical thinking, and that our assumptions need to be challenged (Frangenheim, 2005). Students may also need to practice challenging their assumptions so that they can make intelligent judgements and decisions in the future. Paul (1990), who belongs to the ‘third-strand’ of critical thinking, gives examples of critical thinking questions that probe assumption (e.g. *What are you assuming? What could we assume instead? You seem to be assuming _____. Do I understand you correctly? All of your reasoning depends on the idea that _____. Why have you based your reasoning on _____ rather than _____? Why would someone make this assumption?*)

The textbooks, however, did not provide assumption-related questions for open questions. No open question, for example, asked what the text writer assumed, what students assumed about particular topic in the reading texts, or what the text assumed related to the present condition.

Questions that probe reasons and evidence belong to the third analytic category. Reasoning is an integral part of critical thinking and needs to be promoted in the classroom. Learning by reasoning, according to Mason (2008), “involves considerable mental activity on the part of the pupil, who, using her own capacity to reason, has to work out what to think and do” (p. 8). He also goes on to say that the critical reasoning skills are important qualities of the critical thinker. Another author, Barell (2003), argues that the classroom is not only a place to learn content but also a place where students learn “how to listen to, argue, and reason with each other” (p. 29).

Questions that probe reason and evidence also appeared in almost all of the textbooks analysed. Similar to questions of clarification, the literature has not categorised the types of questions probing reason and evidence. Findings of this study identified two types under this category: supporting/arguing the answer (v) and stating the argument/reason (vi), which could be used by schoolteachers to promote students’ critical thinking skills. Further study may also be needed to add more types under this category.

v. Supporting/arguing the answer

In this kind of question students were asked to give a short response and were asked to support/argue their response. This kind of question was common among questions that probe reason and evidence, and most questions took the Yes/No form. Four different examples of the questions appearing in the textbooks are provided below, and additional examples can be found in Appendix 4.

(9)

Textbook: Interlanguage for language study programme – grade XII unit 13 task 1 (p. 259)

Text: (The text was a poem titled “A Good Boy” by Robert Louis Stevenson – first 3 paragraphs)

“I WOKE before the morning, I was very happy all the day,

I never said an ugly word, but smiled and stuck to play.

And now at last the sun is going down behind the wood,
And I am very happy, for I know that I've been good.
My bed is waiting cool and fresh, with linen smooth and fair
And I must be off to sleep in-by, and not forget my prayer.”

Question: Does the poem have a rhyme scheme? Argue your answer.

(10)

Textbook: Interlanguage for language study programme – grade XII unit 13 task 3 (p. 261)

Text: (The text was a poem titled “The Flight” by John Haines)

“It may happen again – this much
I can always believe
When our down fills with frightened neighbors
And the ancient ear refuse to start
The gunfire of locks and shutters
Echoes next door to the house
Left open
For the troops that are certain to come
We shall leave behind nothing but cemeteries
And our life like a refugee cart
Overturned in the road
A wheel slowly spinning ...”

Question: Besides rhyme, does it employ the other kinds of musical devices? Argue your answer.

The two questions above were taken from poems. As mentioned, literary works can be used to promote critical thinking skills. These examples and the previous ones (examples 7 and 8) provide additional evidence for this notion. In the example below, students are asked to answer a Yes/No question and then support their

answer. However, without a ‘Why’ question, the Yes/No question may not encourage critical thinking.

(11)

Textbook: Interlanguage for science and social study programme – grade XI unit 8 task 19 (p. 151)

Text: (The text was a poster about high school education with some information)

Question: Do you believe that poster is a useful medium to convey messages? Why?

Another variation was that students were asked to support their answer by providing evidence, as can be seen in the following excerpt:

(12)

Textbook: Developing English Competencies for language programme – grade XI chapter 6 activity 4 (p. 131)

Text: (The text was a story titled “The Magic Moneybag”)

Question: Can you describe the characteristics of the wife and the husband? State the evidence to support your answer.

vi. Stating the argument/reason

This type of question asked students to state a reason or argument based on the problem(s) provided in the textbooks, such as students taking a part time job, using a cellular phone while driving, or other educational problems. Two examples of the questions can be seen below, and other examples can be found in Appendix 4.

(13)

Textbook: Interlanguage for science and social study programme – grade XI unit 3 task 22 (p. 53)

Text: (The texts were opinions taken from the internet)

Question: What is the reason/argument behind it?

(14)

Textbook: Interlanguage for science and social study programme – grade XII unit 4 task 1 (p. 71)

Text: (The texts were pictures of high school students taking a part time job)

Question: Do you agree with their decision to work while studying? If you do, state your reasons. If you don't, state what the students should do to make sure that they do not fail.

The two types of questions above were identical to examples of generic questions that probe reasons and evidence proposed by Paul (1990). However, the questions in the textbooks failed to ask students whether the texts presented convincing evidence (e.g. Is there reason to doubt that evidence?) or whether students could provide more evidence (e.g. Can someone else give evidence to support that response?) as suggested by Paul (1990). Asking whether the text writer provided an (strong) argument seems very important in training students to use their critical thinking skills as they will always involve texts during their study. It could also be beneficial when reading propaganda texts in the future and in their daily lives.

The fourth analytic category, viewpoints or perspective, appeared in all of the textbooks analysed and these questions were the most common critical thinking questions in the textbooks. As mentioned, there were 139 questions asking for viewpoints or perspectives, accounting for 40.05% of all of the critical thinking questions found in the nine Indonesian ELT textbooks analysed.

Almost all critical thinking taxonomies, strategies, programmes and tests that have been reviewed in Chapter 3 proposed activities tapping students' viewpoint and perspective. Viewpoint and perspective have also been identified by many authors (e.g. Arju, 2010; Bailin & Battersby, 2009; Lane, 2007) as significant elements of critical thinking. The Quality Assurance Agency (QAA) of the UK (as cited in Healey, 2012) states that a student completing an undergraduate programme "should be able to analyse critically the evidence on such topics from *several different perspectives* and be able to express their opinions on how these issues should be tackled orally as well as in writing" (p. 239). On the other hand, Robson (2006) states that pupils including, young children, have been able to challenge

other people's perspectives. This is why exposing students to perspectives starting from young age is beneficial.

If grouped, the questions regarding viewpoints and perspectives fall into four subcategories. They are direct-viewpoint questions (vii), viewpoint on Yes/No questions (viii), viewpoint on Wh-questions (ix), and viewpoint on literary-work questions (x). Each subcategory is discussed below.

vii. Direct-viewpoint questions

This type of questions asked students' viewpoint directly. Exposing students to such questions may encourage their critical thinking and promote discussions that could lead to dialogical critical thinking. Dialogical critical thinking activity in the classroom has been practiced by Benesch (1999) as mentioned in Chapter 3. The activity, started by giving a statement to comment, was successful to change students' negative views on a topic discussed. Several authors (Cunliffe, 2002; Daniel, 2007; Roche, 2011) also argue that dialogical thinking/practice in the educational context can provide a positive contribution. Two examples of direct-viewpoint questions found in the textbooks are presented below, and another example can be found in Appendix 4.

(15)

Textbook: Interlanguage for science and social study programme – grade XI unit 7 task 1 (p. 123)

Text: (The texts were pictures of farming system)

Question: In your opinion, which one is better: conventional or organic farming?

(16)

Textbook: Interlanguage for language study programme – grade XI unit 6 task 13 (p. 109)

Text: (The text was the interview of an Indonesian culinary expert)

Question: In your opinion, what efforts should Indonesian people do to promote their cuisine internationally?

viii. Viewpoint on Yes/No questions

In the next type of question, students were given Yes/No questions. Then they were asked to express their opinion concerning the response they made. As mentioned, Yes/No questions do not prompt students to think critically if they are not followed by a 'Why' question, as can be seen in the following example:

(17)

Textbook: Interlanguage for science and social study programme – grade XI unit 4 task 1 (p. 61)

Text: (The text was about drugs)

Question: Do you think it is important to know them?

The following two Yes/No questions have the potential to encourage students to think critically as they are followed by questions asking them to expand on their viewpoints. Two more examples can be found in Appendix 4.

(18)

Textbook: Interlanguage for language study programme – grade XI unit 9 task 28 p. 176)

Text: (The text was about internet)

Question: Is the internet harmful? Why?

(19)

Textbook: Interlanguage for language study programme – grade XI unit 6 task 13 p. 109)

Text: (The text was a dialog with a famous Indonesian culinary expert)

Question: Have you ever tasted 'Padang' food? What is your opinion of it?

ix. Viewpoint on Wh-questions

This kind of question was similar to direct-viewpoint questions and had the potential for discussion that may promote critical dialogue. Two examples asking

‘What’ and one question asking ‘Why’ are presented below. More examples can be found in Appendix 4.

(20)

Textbook: Developing English competencies for natural and social sciences – grade XI chapter 6 activity 1 (p. 148)

Text: (The text was about education)

Question: What do you think about education in your country?

(21)

Textbook: Interlanguage for science and social study programmes – grade XI unit 7 task 1 (p. 123)

Text: (The text was the pictures of farming system)

Question: What is your view on the use of pesticides?

(22)

Textbook: Interlanguage for science and social study programme – grade XI unit 7 task 14 (p. 129)

Text: (The text was about agriculture)

Question: Why is it important to increase the agriculture sector in relation to food production?

x. Viewpoint on literary work-related questions

The three kinds of question above were also found after the literary works as presented in the textbooks, thus they are labelled ‘literary work-related questions’. Again, this could show that literary works can be used to teach critical thinking. Three different examples of literary work-related questions with the potential to promote students’ viewpoints and perspectives are presented below. More examples can be found in Appendix 4.

(23)

Textbook: Interlanguage for language study programme – grade XI unit 13 task 2 (p. 238)

Text: (The text was a drama script titled “The Girl-Fish”)

Question: What can you learn from the drama?

(24)

Textbook: Interlanguage for language study programme – grade XI unit 15 task 2 (p. 268)

Text: (The text was a poem and prose)

Question: What makes a poem difficult to comprehend? What makes a poem different from a prose?

(25)

Textbook: Developing English competencies for language programme – grade XII chapter 8 activity 4 (p. 179)

Text: (The text was a poem titled “Love and Friendship” by Emily Bronte)

Question: Can you describe what love and friendship are based on the poet’s point of view?

In all, the four types of questions above may encourage students to explore their viewpoints or perspectives, and ultimately contribute to students’ critical thinking development. Though the findings show that all of these questions centred on students’ perspectives, these can contribute to types of questions probing viewpoint and perspective, which the literature has not identified. The findings can be used by (Indonesian) teachers to tap students’ critical thinking and can be used by them as an idea to develop more varied questions.

However, taking the perspective of the text writers was not facilitated in the textbooks. Apart from the writer’s perspectives, students may also need to be introduced to alternative perspectives or viewpoints. For instance, when talking about Indonesian cuisine, students may be exposed to the perspective of a professional chef considering how to promote Indonesian food internationally. Similarly, when discussing drug abuse, students may be asked to see a drug issue

from the viewpoints of a drug addict, a parent with a child addicted to drugs, a doctor treating a drug-addicted patient, or a drug addict's friends and colleagues. Introducing different perspectives may broaden students' points of view, as they will be exposed to more than one way of seeing a problem. Paul (1990) suggests questions asking different perspectives such as *You seem to be approaching this issue from ___ perspective. Why have you chosen this rather than that perspective? How would other group/types of people respond? Why? What would influence them? Can/did anyone see this another way?*

Though the findings provide a subcategory under the viewpoint or perspective category of critical thinking question, they show that the textbooks did not provide manifold viewpoints. However, the findings may suggest that questions asking viewpoints or perspectives should be used at the stage for prompting dialogical critical thinking. Also, the findings suggest that teachers and textbook writers might include more varied questions or tasks encouraging students' critical thinking.

The fifth analytic category was questions that probe implications, consequences and alternatives. Questions probing alternatives may be beneficial in encouraging students' problem solving skills (Hunter, 2009) as the students may be trained to consider many choices as an alternative before taking a final decision. The results of this study, however, indicate that Indonesian ELT textbooks starting from first to third grade provided only six questions (1.72%) in this vein.

As mentioned, there were four open questions in this category and the other two were closed questions (See Section 6.5). The open questions came from two textbooks (*Interlanguage* for science and social study programmes grade XII and *Interlanguage* for the language study programme grade XII) with similar topics. The questions only asked for an alternative, without probing for implications or consequences. The two questions can be seen in the following excerpts:

(26)

Textbook: *Interlanguage* for science and social study programme – grade XII unit 1 task 12 (p. 13)

Text: (The text was a fable title 'Gecko's Complain.' The story was about a lizard named Gecko, who was disturbed and unhappy)

Question: Did Gecko find a solution to his problem? What was he supposed to do then?

(27)

Textbook: Interlanguage for science and social study programme – grade XII unit 4 task 19 (p. 84) and Interlanguage for language study programme – grade XII unit 4 task 19 (p. 76)

Text: (The text consisted of 3 pictures of school students having a part time job)

Question: Can you suggest a better alternative to help them instead of taking the jobs you see in the picture?

The next analytic category found in the open questions was questions about questions. Some critical thinking strategies and programmes such as the Cognitive Acceleration Approach, Philosophy for Children, De Bono's Six Thinking Hats, Shahini & Riazi, Socratic questions etc. included questions about question as an important element to encourage critical thinking. Examples of questions about questions (Paul, 1990) could be questions asking what a question assumes, another way of posing the same question, breaking down a question, asking whether a question is clear, or easy to answer, or asking whether a question is actually a question.

Different from the textbook used for the pilot study, questions about questions were not found in the textbooks analysed here. All questions in these textbooks tended to point to the texts as the source of discussion. As this category was admitted to be able to foster critical thinking, this suggests that teachers and future textbook writers should facilitate questions about questions.

Questions about predictions were also found in the open questions. Prediction was included as the category that has potential to encourage critical thinking in several critical thinking taxonomies (Bloom's and Freeman's taxonomies), strategies (e.g. Dantas-Whitney, 2002; Yang & Gamble, 2013) and programmes (e.g. Cognitive Acceleration; Fisher's Story-Based Activities; Swartz and Park's Thinking Skills Taxonomy). Similar to questions in different categories, the results of this study show that questions about prediction found in the textbooks did not move from the

students' own perspective. There was no question about prediction from the writers' point of view, for example.

There were three questions about predictions in the textbooks. Two were similar as they were from the same chapters but in different books. One was found in *Interlanguage* for science and social study programmes grade XI and the other was in *Interlanguage* for language study programmes grade XI.

One question asked students to predict the effect of poor development of agriculture, while another asked the student to predict what would happen with a character in the story they were examining, as can be seen in the following excerpts:

(28)

Textbook: *Interlanguage for science and social study programmes - grade XI unit 7 task 14* (p. 129)

Text: (The text was a reading passage consisting of 5 paragraphs titled "Agriculture")

Question: What is the further effect if we have poor development of agriculture?

(29)

Textbook: *Interlanguage for science and social study programmes – grade XI unit 9 task 15* (p. 166-167) and *Interlanguage for language study programme - grade XI unit 11 task 15* (p. 206-207)

Text: (The text was a humorous story titled "Vampire Bat")

A vampire bat came flapping in from the night, face all covered in fresh blood and parked himself on the roof of the cave to get some sleep. Pretty soon all the other bats smelt the blood and began hassling him about where he got it. He told them to piss off and let him get some sleep, but they persisted until he finally gave in. "OK, follow me," he said and flew out of the cave with hundreds of bats behind him. Down through a valley they went, across a river and into a huge forest. Finally he slowed down and all the other bats were excitedly around him with their tongues hanging out for blood. "Do you see that large oak tree over there?" he asked. "YES, YES, YES!!!!" the bats all screamed in a frenzy. "Good!" said the first bat, "Because I didn't."

Question: What did probably happen when the other bats knew how he got the fresh blood?

The eighth analytical category was questions about agreement and disagreement.

They were found in *Interlanguage* for science and social study programmes grade

XII, *Interlanguage* for language study programmes grade XII, *Developing English Competencies* for natural and social science programmes grade XII and *Developing English Competencies* for language programmes grade XII.

Questions about agreement and disagreement took the form of Yes/No questions which cannot promote critical thinking if they are not followed by a ‘Why’ question. These findings suggest that textbook writers or teachers must add the ‘Why’ question to encourage critical thinking or ask students to support their Yes/No responses. In the classroom, this question, along with viewpoint/perspective, may become a trigger for dialogical critical thinking. Two examples of questions about agreement and disagreement which should be followed by the ‘Why’ question can be seen in the following excerpts:

(30)

Textbook: *Interlanguage for language study programme - grade XI unit 6 task 13* (p. 109)

Text: (The text was a dialogue titled “Bondan Winarno, Culinary Expert”)

Question: Do you agree to Bondan’s opinion that the choice of food depends on the money you have?

(31)

Textbook: *Developing English competencies for natural and social science programmes - grade XI chapter 6 activity 1* (p. 148)

Text: (The text was a reading passage titled “Helping Children Discover Their Own Identity” having 12 paragraphs)

Question: Do you agree that the brains of children should be stimulated from early age?

The questions above may contribute to the development of students’ critical thinking skills and can be included in a dialogical critical thinking if they do not stop as the surface level. Students need to be asked to explain why they agreed or disagreed with the question. The following question is a good example of questions about agreement and/or disagreement that are followed by a ‘Why/Why not’ question:

(32)

Textbook: *Interlanguage for science and social study programmes - grade XII unit 5 task 16* (p. 104) and *Interlanguage for language study programme - grade XII unit 5 task 19* (p. 99)

Text: However, bad safety records have been showed by airlines in Indonesia. The idea is so much supported by a number of plane crashes that mostly happened to low-cost airlines. In the past three years, an Indonesian low-cost airline vanished without a trace; another plane cracked open upon landing; a flight overran the runway in Yogyakarta and caught fire, and another discount aircraft went off a runway in Java. Indeed, Indonesia may be the scariest nation in Asia for fliers.

Question: In the text, it is stated that "Indonesia may be the scariest nation in Asia for fliers." Do you agree with that? Why or Why not?

The last analytic category found in the open questions was questions about summary and conclusion. Throughout the textbooks there were six questions about summary and 11 questions about conclusions. The combined questions (17) constituted almost five percent of the questions falling into the analytic categories. Two similar questions probing summary existed in *Interlanguage for science and social study programmes - grade XI unit 4 task 17* (p. 71) and *Interlanguage for language study programmes - grade XI unit 4 task 17* (p. 71). There was a reading text titled *A Needle Exchange Programme* taken from the Internet with instructions that asked students to summarize the text.

Another task that asked students to summarize was found in *Interlanguage for science and social study programmes - grade XII unit 7 task 23* (p. 162). The task asked students to read a novel and to sum up their comments and opinions.

Different from the *Interlanguage* series, the *Developing English Competencies* series did not provide any questions about summary.

Regarding conclusion, there were 11 questions contained in both the *Interlanguage* and *Developing English Competencies* series. Similar to some other questions, one question was found in two different books. Two examples of the questions about conclusion are presented below, and other examples may be seen in the Appendix 4.

(33)

Textbook: Interlanguage for language study programme - grade XII unit 7 task 6 (p. 127)

Text: (The text was a debate script titled "The House Believes That Smoking in Public Places Should Be Banned: A Debate")

Questions: (1) What can you conclude from the affirmative team's case? (2) What can you conclude from the negative team's case?

(34)

Textbook: Developing English competencies for natural and social science programmes – grade XI chapter 3 activity 2 (p. 73) and Developing English competencies for language programme – grade XI chapter 3 activity 2 (p. 60)

Text: (The text contained 5 jumbled paragraphs about global warming. Students were asked to arrange the paragraphs before answering some open questions)

Question: What is the conclusion of the text?

The findings of this study confirm the notion that open questions have enormous potential to promote critical thinking skills as they encourage open responses (Brookfield, 2012; Shahini & Riazi, 2011). The findings also contribute towards identifying the types of questions under critical thinking categories, which the literature has not much discussed. The findings therefore raise the possibility for further research to identify more types of questions under critical thinking categories.

5.5 Elements of analytic categories found in the closed questions

As mentioned, there were 554 closed questions. Nine closed questions (1.62%) fell into the predetermined analytic categories, and 101 other closed questions (18.23%) fell outside the categories and are discussed in section 5.6 (Categories emerging outside the predetermined analytic categories). Of the others, 444 questions did not have the potential to promote students' critical thinking skills; however, they could potentially be used as a stepping-stone to move into critical thinking activities as previously discussed.

There were two elements of the analytic categories contained in the closed questions. They were questions of clarification and questions that probe implication, consequences and alternatives. There were seven questions of clarification with two questions asking about implications, and all of the questions were multi-choice type of question (MC). Other types of closed questions did not contain the elements of analytic categories. The table and figure below illustrate the categories found in the closed questions.

Table 5.3 The analytic categories found in the closed questions

Table 5.3

No	The Analytic Categories	Types of Closed Questions	Number
1	Questions of clarification	MC	7
2	Questions that probe assumptions	-	-
3	Questions that probe reasons and evidence	-	-
4	Questions about viewpoints or perspectives	-	-
5	Questions that probe implications, consequences and alternatives	MC	2
6	Questions about the question	-	-
7	Questions about predictions	-	-
8	Questions about agreement and disagreement	-	-
9	Questions about summary and conclusion	-	-
	Total		9

Figure 5.4 Pie chart of closed questions falling into the predetermined analytic categories

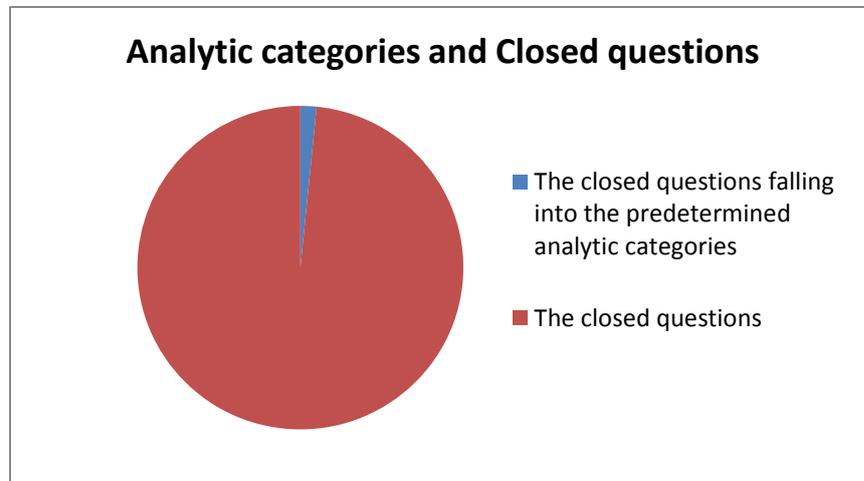


Figure 5.4

The first analytic category found in the closed question was questions of clarification. Similar to those found in the open questions, clarification in the closed questions also asked students to explain the meaning of statements. The difference was that in the closed questions the choices had already been provided. Two examples are presented below, and two others can be seen in Appendix 5.

(1)

Textbook: Interlanguage for science and social study programmes – grade XI unit 6 task 16 (p. 111) and Interlanguage for language study programme – grade XI unit 8 task 16 (p. 151-152)

Text: (The text was a passage about love story)

Question: (number 10)

“...if the day comes when fate brings him to her again he can take some of those back with him.” What does the statement mean?

- a. She wanted her parents to bring him to her.
- b. She wanted the man to take back his papercranes.
- c. She hated the papercranes so that she wanted the man to take them back.
- d. He believed that the girl would return his papercranes.

e. The girl wanted the man to know that she loved him very much.

(2)

Textbook: Interlanguage for science and social study programmes – grade XI unit 7 task 29 (p. 137)

Text: (The text was a passage titled ‘Why are Diazinon and Dursband should be Banned’)

Question: (number 5)

“Children are so much more sensitive than adults to the toxic effects of chemicals.” What does the statement mean?

- a. We should protect our children from dangerous chemicals.
- b. Children are resistant to several chemicals.
- c. Parents should not be worried about their children’s health.
- d. The government should pay more attention to adults than to children.
- e. Children have greater immunity than adults.

The other analytic category found in the closed questions was questions that probe implications, consequences and alternatives. Two questions about implication were actually similar to a question found in *Interlanguage* for science and social study programme grade XI and repeated in *Interlanguage* for language study programmes grade XI. The question asked students to find what a statement implied with five potential choices provided. The question is as follows:

(3)

Textbook: Interlanguage for science and social study programmes - grade XI unit 9 task 18 (p. 168-169) and Interlanguage for language study programme – grade XI unit 11 task 18 (p. 208-209)

Text: (The text was a reading passage titled ‘Fluffy Bunny Rabbit’)

Question: (Number 7)

“If my neighbours find out my dog killed their bunny, they’ll hate me forever” (line 4). The sentence implies

- a. Chris wanted his neighbour to know that his dog killed the rabbit.

- b. Chris worried if his neighbour was angry with him.
- c. Chris hated his neighbour so that he killed the rabbit.
- d. Chris let his dog eat the rabbit.
- e. Chris was happy because his dog could kill the rabbit.

These findings might help us to understand that even though closed questions do not encourage open responses, they have the potential to promote students' critical thinking skills. The findings can possibly give an idea for textbook writers or schoolteachers to create more critical thinking activities based on closed questions. The section below shows other findings that closed questions have the potential to encourage critical thinking.

5.6 Categories emerging outside the predetermined analytic categories

During the textbook analysis, several questions that had the potential to promote students' critical thinking skills emerged, though some of these questions did not fall into the predetermined analytic categories. The questions were both open and closed questions. The total number that did not fit into an existing category was 21 open questions and 101 closed questions. When grouped, the questions fell into two main categories: interpretation and analysis. The table below illustrates the categories emerging outside the predetermined analytic categories.

Table 5.4 The categories emerging outside the predetermined analytic categories

Table 5.4

No	Types of questions	Number	Category
1	Open question	4	Interpretation
2	Open question	17	Analysis
3	Closed question (TF)	2	Interpretation
4	Closed questions: TF (4) MC (7) MT (86)	99	Analysis

	SC (2)		
	Total	122	

Questions about interpretation were those questions that require students to provide their own interpretation of what they have read. This was not included in the predetermined analytic categories, as the majority of critical thinking taxonomies, strategies, programmes and tests that were examined and evaluated in the methodology chapter did not mention this category. ‘Sample verbs’ attached to Bloom’s taxonomy included the word ‘interprets’ in the comprehension stage. However, there was no example provided how interpretation was conducted in the comprehension stage. This new category was found especially in the literary text sections. Fisher (2008), an author proposing a critical thinking framework for story-based activities, also did not include this category in his framework.

There were four open questions asking about interpretation. One question asked for a direct interpretation whilst three others posed indirect interpretation questions. The direct interpretation question was found in *Developing English Competencies*, and the indirect were found in the *Interlanguage* series. The indirect questions were found in tasks that asked students to ‘interpret’ what love was, how a singer’s admirer looked and what the singer hoped for. They were all based on literary works. Those complete questions can be seen in the excerpts below:

(1)

Textbook: *Developing English Competencies* for language programme – grade XII chapter 8 activity 8 (p. 177)

Text: (The text was a song lyric titled “Angel”)

“And through it all she offers me protection

A lot of love and affection

Whether I'm right or wrong

I know that life won't break me

When I come to call she won't forsake me

I'm loving angels instead.”

Question: What is your interpretation to the chorus of the song?

(2)

Textbook: Interlanguage for language study programme - grade XI unit 14 task 9 (p. 259)

Text: (The text was a song lyric titled "Better than Love")

Question: (1) How does love seem according to the song? (2) How does her admirer look like? (3) What does the singer hope?

In order to answer the four questions above, students needed to read the entire song and understand what its lyrics meant. They could then complete their own interpretation. As mentioned, interpretation was also found in the closed questions (True/False question). There were two questions that were very similar, found in two different books with a similar topic, as can be seen in the following excerpt:

(3)

Textbook: Interlanguage for science and social study programmes – grade XI unit 10 task 13 (p. 183) and Interlanguage for language study programme – grade XI unit 12 task 13 (p. 223)

Text: (The text was a dialogue between a pirate and landlubber)

"I notice you also have an eye patch. How did you lose your eye?" The pirate answered, "I was sleeping on a beach when a seagull flew over and crapped right in my eye." The landlubber asked, "How could a little seagull crap make you lose your eye?" The pirate snapped, "It was the day just after I got my hook!"

Question: (number 6) - The pirate lost his eye because of his own stupidity (True/False).

To answer this question students needed to understand and interpret what the text was about and then decided whether the question was true or false.

The other category emerging outside the predetermined analytic categories was questions about analysis. To answer the analysis questions, students needed to examine all information of a text by connecting one sentence to another to make a judgment; this was a step beyond interpretation. Similar to questions about interpretation, questions about analysis were not included in the predetermined

analytic categories, as they were not mentioned by a majority of existing critical thinking taxonomies. Bloom's taxonomy mentioned 'analysis' as one of the stages; however, the problem with Bloom's taxonomy was its lack of explicit examples.

Textual analysis questions, for example, were found in *Interlanguage* for language study programmes – grade XII unit 11 task 3 (p. 220). Three open questions following the task are:

- (4) How is the merchant characterized?
- (5) How is the merchant's wife characterized?
- (6) How is the merchant's son characterized?

The text was a drama script titled *All for a Pansa*. To find the characterization of the characters in the play, students needed to read the drama, connect one sentence to another for comprehension, interpret the meaning of dialogue, and, finally, analyse how the dialogue described the characterization.

As mentioned in Table 5.4, there were 17 open questions put into the 'questions about analysis' category. The questions were dominated by texts of literary works, both in *Interlanguage* and *Developing English Competencies* series. Three different examples of questions about analysis are presented below, and three others may be found in Appendix 6.

(7)

Textbook: *Interlanguage* for language study programme – grade XII unit 11 task 8 (p. 226)

Text: (The text was a drama script titled "The Pumpkin in the jar")

Question: How are the King and the maiden characterized?

(8)

Textbook: *Developing English competencies for natural and social science programmes* – grade XI chapter 3 activity 4 (p. 65)

Text: (The text was a reading passage about forest)

Question: What is the thesis statement of the text above?

(9)

Textbook: Developing English competencies for natural and social science programmes – grade XI chapter 3 activity 2 (p. 73) and Developing English competencies for language programme – grade XI chapter 3 activity 2 (p. 60)

Text: (The text was jumbled paragraphs and students were asked to arrange them)

Question: What is the main idea of each paragraph?

In answering the three questions above, students needed to perform a textual analysis. In question 8, for example, students needed to connect one sentence to another, make an interpretation of the meaning, and intellectually guess what the text was about and finally decided the thesis statement of the text. As mentioned, this was a step beyond interpretation. A similar thing also happened in answering question number 9.

Table 5.4 also shows questions about analysis in closed questions where there were 99 in the category. They were found in four types of closed questions: True/False (TF), Multi-choice (MC), Matching Task (MT) and Sentence Completion (SC). The Listing Information (LI) questions did not contain any questions about analysis whilst the matching task contained most of the questions about analysis. In general, questions about analysis in the closed questions were categorised into three kinds: finding antecedents (pronoun reference), finding synonyms and text analysis. The following are some examples of finding antecedents (xi), finding synonym (xii) and text analysis (xiii).

i. Finding antecedents

Finding antecedents may be the simplest critical thinking activity of this category and could be considered the next stage of promoting critical thinking after explicit questions. Students needed to relate a pronoun with the previous sentence(s), interpret the meaning and decide the word the pronoun referred to. However, this may be less complicated than finding synonym and text analysis. Two examples were provided below, and another example can be found in Appendix 6.

(10)

Textbook: Interlanguage for language study programme – grade XI unit 10 task 15 (p. 189)

Text: (The text was a reading passage titled 'Home Schooling) – MC questions

Question: Numbers 8 and 9

(Number 8) The word 'it' in line 16 refers to...

- a. a social community
- b. an ethnic group
- c. a public school
- d. home schooling
- e. the government

(Number 9) The word 'them' in the last line refers to...

- a. the government
- b. parents
- c. children
- d. home schools
- e. public schools

(11)

Textbook: Developing English competencies for natural and social science programmes – grade XI chapter 3 activity 6 (p. 68)

Text: (The text was a reading passage titled 'The Importance of Rainforests') – MT questions

Question: What do the words refer to?

- 1. They (paragraph 1 line 3)
- 2. This (paragraph 1 line 7)
- 3. They (paragraph 4 line 3)
- 4. This (paragraph 4 line 6)

ii. Finding synonyms

This was the next stage of analysis. To do this, students needed to understand the choices provided in the textbooks. Then they put them in context of the sentence provided and interpreted the meaning of the sentence. And finally, they decided which word/expression best suits the context. ‘Finding synonym’ questions were also found in the literary texts. Three different examples are provided below, and more examples can be seen in Appendix 6.

(12)

Textbook: Interlanguage for science and social study programmes – grade XI unit 9 task 25 (p. 172)

Text: (The text was a reading passage titled ‘Fixing the Headstone’) – MC question

Question: (Number 5)

“The old man grumbled.” The word grumble in the sentence is similar in meaning to...

a. Smile b. Attract c. Persuade d. Think e. Complain

(13)

Textbook: Interlanguage for science and social study programmes – grade XI unit 10 task 27 (p. 190-191)

Text: (The text was a reading passage titled ‘A Small Experiment’) – MC question

Question: (Number 9)

The word “response” in the story is similar in meaning to. . .

a. Statement b. Question c. Reply d. Confession e. Declaration

(14)

Textbook: Developing English competencies for natural and social science programmes – grade XI chapter 2 activity 7 (p. 43)

Text: (The text was a reading passage titled ‘Miss Mole Catches a Ghost’) – MT questions

Question: Find the words in the text which have the following meanings.

1. Took a long deep breath that can be heard
2. Said something while crying noisily

3. Looked long at somebody or something
4. Made a gentle light sound
5. Laughed lightly in nervous way
6. Complained in bad tempered way
7. Took something firmly, suddenly, roughly
8. Took one or more quick deep breaths

iii. Text analysis

Text analysis in the closed questions was similar to analysis in open questions. Text analysis activities had students connect one sentence to another, interpret the sentence connection, decipher the meaning and make a judgment. Text analysis was also found in almost all types of closed questions. However, the number was less than that of the analysis activity in finding synonyms. Two examples are provided below, and more examples can be found in Appendix 6.

(15)

Textbook: Interlanguage for science and social study programmes – grade XI unit 1 task 18 (p. 13)

Text: On the evening of 31st of May, the ceremony to cast the greediness spirit away (Muai Antu Rua) is held. Then, offering ceremony (miring) is conducted. Thanking gods for the good harvest, guidance, blessings and long life is done through sacrificing a cockerel. At midnight spirit welcoming procession (Ngaluh Petara) is held. Then, the celebration gets merrier as people start singing and reading poems. On the 1st of June, the homes of the Dayaks are opened to visitors. Cock-fighting, blowpipe skill demonstration, and ngajat competitions are held. (TF question)

Question: (Number 5) In the Gawai Dayak's eve the people are very silent. (True/False)

(16)

Textbook: Interlanguage for science and social study programmes – grade XI unit 5 task 12 (p. 83)

Text: (The text was a reading passage titled 'The Four Friends') – SC question

Question: (The question was textually-implicit question that required students to understand the context in order to complete the sentence)

(Number 10) Mama Ostrich could get her chicks back because of the . . . with the mongoose.

The findings show that there are two other categories that have the potential to promote students' critical thinking skills. They were named 'interpretation' and 'analysis.' Those two words were found in Bloom's taxonomy. The former was included in 'sample verbs' attached to the comprehension stage, while the latter was a stage of the taxonomy itself. As mentioned, Bloom's taxonomy lacks explicit examples, and very little was found in the literature on giving explicit examples of Bloom's taxonomy. The findings of this research provide insights for possible activities connected to Bloom's taxonomy which can be used by schoolteachers or course book writers.

The results of this research also support the idea that critical thinking questions can be infused in both open and closed questions. Though closed questions do not encourage open responses which promote students to express their opinion, closed questions could play a pivotal role in textual-analysis questions. These findings could be used to help (English) teachers modify activities from textbooks or course books and will help other researchers design different research.

In sum, there were elements of the predetermined analytic categories contained in the Indonesian ELT textbooks and two other categories with potential to promote critical thinking also emerged. Both open and closed questions contained questions promoting students critical thinking skills. Of the 2,194 questions analysed (1,640 open questions and 554 closed questions), 347 questions (15.81%) from multiple categories had the potential to enhance students' critical thinking skills. The table and figures below illustrate the number of critical thinking questions and the kind of critical thinking categories that were contained in the Indonesian ELT textbooks examined.

Figure 5.5 Pie chart of questions having the potential to promote critical thinking skills

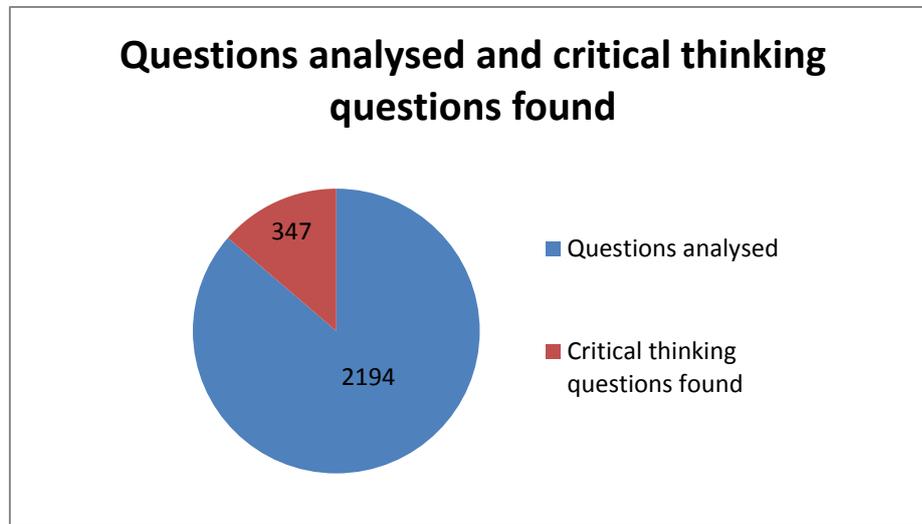


Figure 5.5

Table 5.5 The critical thinking categories emerging in the Indonesian ELT textbooks

Table 5.5

No	The Categories emerging in the textbooks	Number	Percentage
1	Questions of clarification	30	8.645%
2	Questions that probe assumptions	-	-
3	Questions that probe reasons and evidence	24	6.916%
4	Questions about viewpoints or perspectives	139	40.057%
5	Questions that probe implications, consequences and alternatives	6	1.729%
6	Questions about the question	-	-
7	Questions about predictions	3	0.864%
8	Questions about agreement and disagreement	6	1.729%

9	Questions about summary and conclusion	17	4.899%
10	Questions about interpretation	6	1.729%
11	Questions about analysis	116	33.429%
	Total	347	100%

Figure 5.6 Chart of the number of critical thinking categories contained in the textbooks

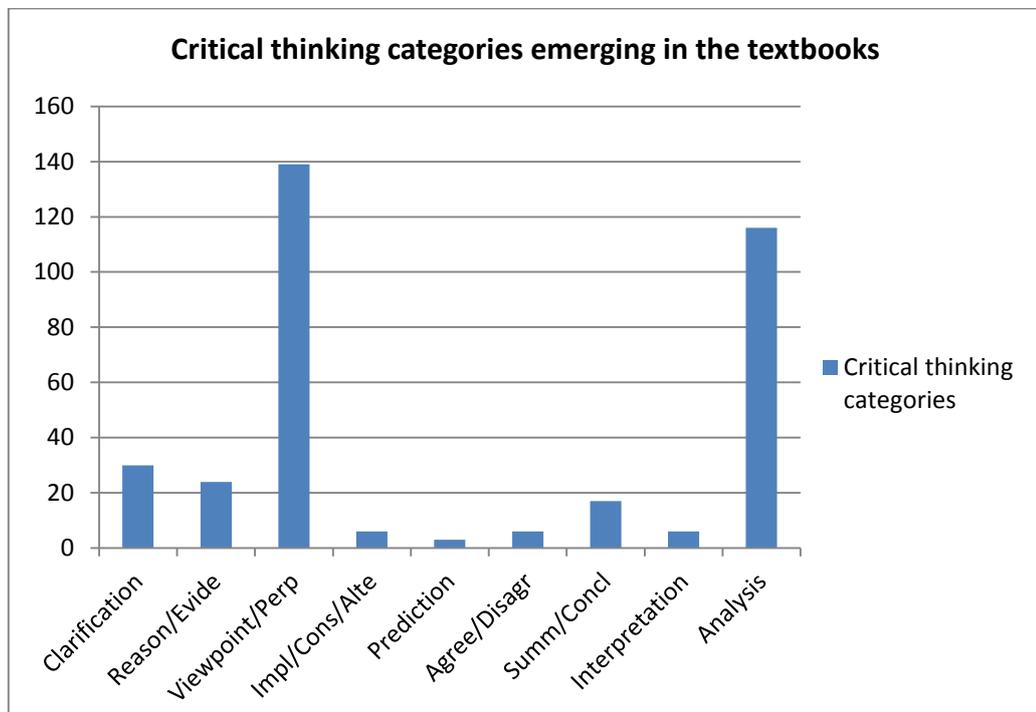


Figure 5.6

Figure 5.7 The percentages of critical thinking questions contained in the textbooks

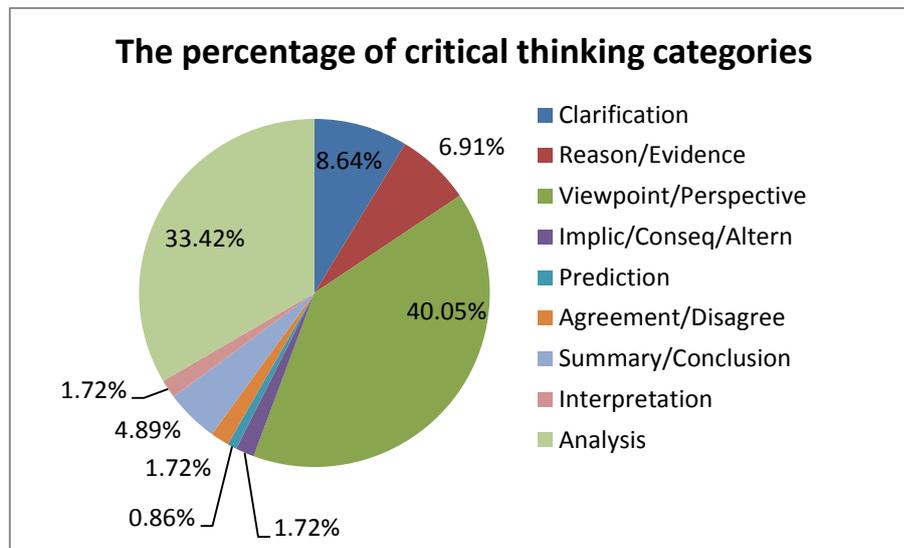


Figure 5.7

The present study has offered a framework for the exploration of critical thinking in textbooks. Though the framework was used to investigate ELT textbooks, it could be used to investigate those of other school subjects. It is also possible that the framework is used by schoolteachers to modify questions or tasks provided by textbook writers. Finally, further experimental studies could be carried out in order to assess the effects of this framework in promoting students critical thinking skills.

5.7 The critical thinking categories

This study constructed criteria to be used in investigating critical thinking. As mentioned, the criteria were constructed by reviewing, examining and evaluating critical thinking taxonomies, strategies, programmes and tests. In general, the criteria seemed applicable to identify questions that contained elements of critical thinking. Also, the criteria were effective in sorting critical from non-critical thinking questions. However, the criteria did not always work well in identifying whole questions. This occurred especially when the questions fell into 'grey' areas.

The findings of this research show that most questions found in the Indonesian ELT textbooks fell into textually-explicit questions though some fell into critical thinking

categories. The questions falling into the critical thinking categories were all implicit questions, which had potential to promote critical thinking skills. Unlike the explicit questions whose answers were clearly stated in the text, implicit questions may make students examine and evaluate the text to find an answer. However, not all questions could be easily categorised as explicit, implicit or critical questions. There were a few questions that fell into the explicit-implicit-critical progression. They were the questions falling into the grey areas as in the following example:

(1)

Textbook: Interlanguage - grade X unit 6 task 10 paragraphs 1-2 (p. 103-104)

Text: Many years ago, when great forests still covered the hills of Japan, a samurai named Hikaru lost his way in a sudden winter storm. Snow pellets sharp as spears pierced his cloak and drove him blindly into the deep woods. Cold stalked him, and he had no weapon to battle this invisible enemy. Finally his horse burst into a clearing. The wind rattled the tree limbs, but no snow fell here. A wooden house squatted beside a huge camphor tree. The snow was a smooth white carpet. This quiet place seemed peaceful enough, but he sensed someone watching, waiting in silence (The story goes on by telling that Hikaru met Yuki, and every time Hikaru thought 'I want....,' Yuki always offered him food and drink and sang a song to soothe Hikaru's soul).

Question: (1) Where does the story come from? (2) Who is Hikaru (3) What happened to him (4) How was the weather then? (5) What happened to Hikaru after she met Yuki?

Question number one is completely explicit as students could easily find that the story comes from Japan. Students can also answer the second, third and fourth questions without any difficulty for a similar reason. They may find difficulty when answering question number five as the text does not explicitly state what happened to Hikaru after he met Yuki. The question stands in the explicit-implicit-critical progression; this is what is meant by the term 'grey areas.'

There were also questions in the critical thinking categories that fell in grey areas, standing in the implicit-critical progression. These questions were in the categories 'questions of clarification' and 'questions about analysis.' The latter was a category emerging outside the predetermined analytic categories during the analysis process.

As mentioned, clarification is one of the critical thinking elements found in almost all critical thinking strategies, programmes and tests. Scholars also argue the importance of this category. For example, Elder and Paul (2013) mention that ‘clarity’ is one of the intellectual standards for reasoning. Similarly, Ennis (1996) states it is one of six basic elements in critical thinking and goes on to affirm that “when you write and speak, it is important to be clear in what you say. If others are not clear, try to get them to be clear. Make sure that you understand what they are saying” (p. 7).

The current study found that the Indonesian ELT textbooks examined contained 30 questions of clarification. The questions were found in both open and closed questions, and as mentioned there were four types of questions of clarification: word, phrase, sentence and poetic expression clarification. Word-clarification questions in the open questions, for example, asked students to clarify or give the meaning of words. Similar instruction applies to the other three clarification questions. In the closed questions, sentence clarification questions asked students to provide the meaning of sentences, but the answers had been provided as can be seen in the excerpt below:

(2)

Textbook: Interlanguage for science and social study programmes – grade XI unit 7 task 29 (p. 136-137)

Text: (The text was a passage titled ‘Why are Diazinon and Dursband should be Banned’).

Question: “Children are so much more sensitive than adults to the toxic effects of chemicals.” What does the statement mean? a. We should protect our children from dangerous chemicals. b. Children are resistant to several chemicals. c. Parents should not be worried about their children’s health. d. The government should pay more attention to adults than to children. e. Children have greater immunity than adults.

It is interesting to note that those four types of clarification questions are different in their degree of promoting critical thinking. While sentence or poetic expression questions may promote critical thinking as they require students to get involved in the thinking processes by, for example, making connections and associations, word-clarification questions may not always encourage critical thinking. Examples of

word clarification questions can be seen in the example number 2 of section 5.4 (Elements of analytic categories found in the open questions) asking “What does the word ‘cliché’ mean?” Another example can be found below:

(3)

Textbook: Interlanguage for language study programme – grade XI unit 15 task 9 (p. 273)

Text: (poem) ...Education will help you excel; Not lead you to a county jail 10; You won't find yourself doing ten; In any county pen; Or being charged with first degree murder; In a court of order; And as your family *wail* 15; You're getting life without *bail*....

Questions: What does the word ‘wail’ mean? What does the word ‘bail’ mean?

The questions asking the meaning of ‘cliché,’ ‘wail’ and ‘bail’ are certainly questions asking for clarification, and the study included them in the critical thinking categories. However, they cannot encourage critical thinking if students already know the meaning of the words. In this case they may simply translate it without seeing the whole text. Critical thinking may occur in those who do not know the meaning of the words as they will probably see the sentence, relate it to the other sentences and try to understand the context before finally making an ‘intellectual’ guess. This shows that word-clarification questions could fall into the grey areas.

A similar issue occurred in the ‘questions about analysis’ category. As mentioned, this category emerged during the data analysis and was found in open and closed questions, with the questions in the closed group divided into three subcategories: finding antecedent, finding synonym and text analysis. Examples of finding synonyms can be seen in numbers 12 and 13 of section 5.6 (Categories emerging outside the predetermined analytic categories). Question 12 asked: “The word grumble in the sentence is similar in meaning to... a. Smile b. Attract c. Persuade d. Think e. Complain,” while question 13 asked: “The word “response” in the story is similar in meaning to. . . a. Statement b. Question c. Reply d. Confession e. Declaration.”

Similar to the word-clarification questions, the two ‘finding synonym’ questions cannot promote critical thinking if students already know the meaning of ‘grumble’ and ‘response’ and the meaning of the other choices provided. They would then simply need to match them. The questions were certainly implicit questions, and they may promote critical thinking skills if students did not already know the meaning of the two words and the choices, as they would have to perform analytical processes.

The abovementioned findings show that there were a few questions that fell into the explicit-implicit-critical progression; therefore, the findings indicate that the critical thinking categories constructed in the study were not always firm in identifying critical thinking questions. An implication of this is the possibility that clearer criteria should be established.

In future investigations it might be possible to go deeper into the criteria. As mentioned, this study constructed criteria as the results of evaluating, examining and synthesising critical thinking strategies, programmes and tests. To establish more robust criteria for further progress, there might be a need for a specific conception of each criterion that could be obtained from academics and scholars involved in critical thinking activities. Take ‘clarification’ as an example as this criterion is believed to be an element of critical thinking by most scholars. ‘Clarification’ might need to be explored by investigating critical thinking practitioners’ perspectives, for example, to come up with a stronger criterion.

From another perspective, however, these findings may help us understand that defining critical thinking is almost impossible after all since it is an elusive concept (Moon, 2008). Previous studies (Ahern, O'Connor, McRuairc, McNamara, & O'Donnell, 2012; More, 2011; Krupat, Sprague, Wolpaw, Haidet, Hatem, and O'Brien, 2011) have attempted to find what academics hold in common regarding critical thinking. Though the studies may be successful in listing some similar conceptions, they fail to show an agreed conception of critical thinking as one similar concept may be interpreted differently by academics from different fields. Brookfield (1987) states that “manifestations of critical thinking vary according to

the contexts in which it occurs” (p. 6). So, classifying what kind of ‘clarification’ questions may also be critical thinking questions can be subjective.

5.8 Critical thinking, literature and ESOL

The results of this study show that the Indonesian ELT textbooks, especially those for language study programmes, contained literary works such as folktales, short stories, poetry, song lyrics and play scripts. Both open and closed questions following the literary texts were manifold, some of which fell into categories of critical thinking. Though there were not many questions facilitating students’ critical thinking in the textbooks in general, the number of critical thinking questions appearing after literary works was above those of other text types. In this study, all questions following the literary texts are referred to as ‘literary questions.’

The current study found that literary questions fell into several critical thinking categories. In the category of question of clarification, students were asked to clarify poetic expressions, as can be seen in question number 7 (iv. poetic expression clarification) of section 5.4 (Elements of analytic categories found in the open questions). The question asked: “What does the line ‘wood people pale as moonbeam’ mean?” Another example is students were asked to explain the meaning of stanza as can be seen in the following excerpt.

Textbook: Interlanguage for language study programme – grade XII unit 13 task 5 (p. 262-263)

Text: (The text was a poem titled “Actors Wear a Special Mask” by Robert Devisee)

“Actors wear a special mask:
One that’s most revealing.
When they pretend they’re someone else
They hang themselves to dry.

The tears and screams they’ve made their task
Leave nothing for concealing.
Each wound must bleed again, or else
The audience won’t cry.”

Question: (1) What does the first stanza mean? (2) What does the second stanza mean?

Literary questions falling into the critical thinking category were also found in the questions that probe reasons and evidence. For example, students were asked to argue whether a poem employed other types of musical devices, as can be seen in question number 10 of section 5.4 (Elements of analytic categories found in the open questions). The questions ask: "Besides rhyme, does it (the poem) employ the other kinds of musical devices? Argue your answer."

Other literary questions probing reasons and evidence asked students to support their answer as to whether a drama had a happy or sad ending and whether a passage was called a short story or tale. Apart from these the study also found that there were many literary questions that fell into the category of questions about viewpoints or perspectives. Examples of literary questions falling into this category are:

What do you learn from the story?

What do you learn from the (fairy) tale?

What can you learn from the drama?

What message does the drama contain?

What makes a poem difficult to comprehend? What makes a poem different from a prose?

What is your view on love and friendship?

What are the moral values you can find from the story?

With regard to questions that probe implications, consequences and alternatives, these literary questions asked students to find an alternative solution to a problem faced by a character in a fable. This is a very creative question but, unfortunately, questions such as this one were few. A similar thing also happens with literary questions in the category of prediction in which the students were asked to predict what would probably happen to a character in a story.

Literary questions were also found in the category of questions about summary and conclusion. In *Developing English Competencies* for language programmes grade XI chapter 9 activity 9 page 192, for example, students were asked to draw a conclusion about a poem by Emily Bronte. In another book, the students were asked to make a conclusion about a story.

Two other categories that emerged during data coding also contained literary questions. Questions about interpretation asked students to interpret the chorus of the song, as can be seen in question number 1 of section 5.6 (Categories emerging outside the predetermined analytic categoris). The question asked: "What is your interpretation to the chorus of the song?"

Literary questions that belong to the category of questions about analysis were also found in the textbooks. One of the questions was taken from a short story by Guy de Maupassant, in which students were asked to discuss the characterization of the story's characters.

It is interesting to note that there were many critical thinking questions following literary texts. Another important finding was that the questions fell into almost all categories of critical thinking. The findings are in agreement with the empirical study by Daud and Husin (2004) that used *Othello*, as mentioned in the literature review. This study has proven that literary works can be used as a means of teaching critical thinking.

Several other studies (Commeyras, 1990; Jarvis, 2000; McDonald, 2004; Rødnes, 2012; Sabeti, 2012; Urlaub, 2012) using literary texts to promote students' critical reading, thinking and reasoning skills have also shown very positive results. McDonald (2004), for example, used a novel titled *I am Susannah* by an Australian award-winning author, Libby Gleeson, while Sabeti (2012) used graphic novels "to explore the institutional critical reading practices that take place in English classrooms in the senior years of secondary school" (p. 191). A study by Jarvis (2000) on two groups of women studying English literature at an education college shows that literature improved their analytical skills and influenced their lives in that they did not just take information for granted.

As mentioned in the literature review, Matthew Lipman created stories (children's novels) to teach critical thinking to children. His method is called Philosophy for Children (P4C). The aim of Lipman's P4C, according to Vansieleghem and Kennedy (2011), "is not to turn children into philosophers or decision makers, but to help them become more thoughtful, more reflective, more considerate, and more reasonable individuals" (p. 174). Some other authors have been proponents of P4C (Aubrey, Ghent, & Kanira, 2012; Costello, 2000; Fisher, 2008; Lam, 2012) for improving children's critical thinking skills.

The studies above have shown the effectiveness of using literature in promoting students' critical thinking skills. In addition to being used as a vehicle to teach critical thinking, literature is also believed to play a very important role in ESOL. Lazar (1993) and Collie & Slater (1987), for example, discuss why language teachers need to include literary texts in language teaching. Their reasons are, among others, giving authentic material, helping students understand another culture (cultural enrichment), providing a stimulus for language acquisition (language enrichment), and encouraging students to talk about their opinions and feelings (personal involvement). Arguing against those who say that literature is not suitable for students at a lower level of ESOL as they have a limited knowledge of vocabulary and grammatical structures, Lazar (1994) also argues that "despite their very limited proficiency in the language, students need the challenge and stimulation of addressing themes and topics which have adult appeal, and which encourage them to draw on their personal opinions and experiences" (p. 116).

Aside from the advantages mentioned by Lazar, literature in ESOL provides some other benefits. A study by Kim (2004) conducted in a class of the Intensive English Program (IEP) at a large mid-western American university shows that literature helps get students "engaged in highly dialogical social interactions in the target language," (p. 145) promoting their communicative skill and increasing confidence.

Perhaps the most striking suggestion is that literature can be used to promote tolerance. As mentioned, this is another educational objective in Indonesia. That literature can promote tolerance is stated by Ghosn (2002):

Another compelling reason for using literature in a language class is the potential power of good literature to transform, to change attitudes, and to help eradicate prejudice while fostering empathy, tolerance, and an awareness of global problems. The power of literature in developing empathy and tolerance is well documented in research on multicultural literature and peace education, but so far the opportunities for communicating these sorts of socially beneficial themes have not been exploited in EFL programmes. (p. 176)

The abovementioned studies and results have proven that literature can provide an important contribution in ESOL. It can be used to teach critical thinking, improve students' communicative skills and confidence, increase their language proficiency, expose them to different cultures, and promote empathy and tolerance. However, literature seems to be gaining little attention in ESOL and has not been used optimally in the teaching of English as a foreign language, as stated by Ghosn (2002) above. It is possible, therefore, that literature could be included in ESOL, and these findings suggest that literature should be retained in the ESOL/ELT curriculum.

The findings of the current study show that the Indonesian English textbooks used by secondary schools contained literary-based questions, and some of these questions do facilitate students' critical thinking skills. It can be assumed that the textbooks have provided the foundation for the development of students' language proficiency and critical thinking skills. Therefore, the present results are significant in at least major two respects. Firstly, the literary works contained in the textbooks could be used to develop Indonesian students' English proficiency. Secondly, the works can also be used to encourage the students' critical thinking skills. Dialogical critical thinking through literature can also be introduced to foster empathy and tolerance, which are beneficial for a pluralist Indonesia to avoid future conflict. Finally, it could support at least two qualities of Indonesia's educational goals: being both critical and tolerant.

5.9 Textbooks and critical thinking skills

As mentioned in the literature review, studies on critical thinking have shown that the teaching of critical thinking in Muslim countries is possible. Empirical studies conducted in Asia prove similar results; teaching critical thinking in Asia is possible and Asian students' critical thinking skills can be improved. As those countries have similar historical, cultural, social and religious backgrounds to Indonesia, developing critical thinking should, therefore, also be possible in the Indonesian context. The results of this study show that the Indonesian ELT textbooks examined did contain elements of critical thinking.

The Indonesian ELT textbooks, however, did not aim to build critical thinking skills. An examination of the 'preface' pages of *Developing English Competences* and the *Interlanguage* series seems to confirm this. The 'preface' page of *Developing English Competencies* grade X clearly stated that the book was designed to facilitate students in communicating in English and prepare them for the university level. The page also mentioned that the book was modelled on a literacy-based approach and included concepts such as interpretation, convention, collaboration, cultural knowledge, problem solving, reflection and language use. An examination of the reflection pages at the end of each unit revealed that they were actually a summary of the lesson such as grammar and vocabulary. More investigation is required to determine what sort of problem solving activities can be found in the book. Finally, the preface mentioned that the activities available in the book intended to explore students' creativity and the students were "expected to be skilful in doing the exercises, acting out dialogues, constructing sentences or texts and the other activities that facilitate you (students) to be skilful in using English in communication" (*Developing English Competencies* grade X p. iv). The 'preface' pages of the books for grade XI and XII are similar to that of grade X.

The 'preface' page in the *Interlanguage* series was similar in all books. The page stated that the books were organised into two learning cycles: oral and written. While the oral cycle emphasised the development of listening and speaking skills, the written cycle developed reading and writing skills. The 'preface' pages confirmed that the skills were integrated and organised into four learning activities:

introduction, presentation of the target language, explanation of language components, and exercises of the target language. The pages also mentioned that for the purpose of language enrichment and evaluation, each unit was complemented with take-home assignments and a review.

The use of both series for senior secondary schools all over the Indonesian archipelago has been approved by BNSP. It is stated in each book that “these textbooks have been examined by The National Education Standardization Body (BNSP) and have been decided as proper textbooks to be used in learning processes through the Regulation of National Education Minister Number 34 Year 2008.”

Considering these findings, further studies are recommended. Two kinds of future research that might need to be undertaken are textbook development and its consumption. As critical thinking has been proven possible to be infused into ELT, and in non-Western countries, further work might deal with how to develop ELT (ESOL) materials that build upon both English proficiency and critical thinking skills. Further work in Indonesia might focus on developing ELT materials promoting critical thinking skills that are specifically needed for the Indonesian context so as to address educational, social and political issues faced by the country.

A future study on developing ELT materials by infusing critical thinking into them might be followed by a study of their consumption. For example, it can investigate how teachers use the teaching materials. Such a study is currently rare (Hardwood, 2014) yet is worth doing as problems or difficulties encountered by teachers must be known.

5.10 The authors of the textbooks

The findings presented in the previous section showing that the Indonesian ELT textbooks did not intentionally aim to build critical thinking may indicate that the authors of the two series were unlikely to be aware that the questions they created contained elements of critical thinking. It may be inferred that the Indonesian government may not prioritise critical thinking skills, even though critical thinking

has been included in the national educational objectives. This can also be seen in BNSP's list of criteria that does not include critical thinking as one of the requirements. This is supported by the ELT syllabi, which do not specify critical thinking as an important component. As a result, text-based questions in the textbooks may not be intentionally created to promote or build Indonesian students' critical thinking skills. They simply aimed to develop learners' English language proficiency in general while focusing on speaking, listening, reading and writing skills.

The authors' lack of awareness of the critical input in materials occurs not only in Indonesian ELT textbooks but also in other national contexts. In Iran, for example, critical thinking is not popular in primary and secondary education even though many Iranian academics are aware of the importance of critical thinking and many studies have proven that critical thinking is possible in the country. Birjandi and Alizadeh (2013) state, "the education system practiced in Iranian schools and private institutes is mainly based on transmitting information and limiting the learning to memorizing the materials. As a result, learners who grow in such systems rarely develop the capacity to think critically" (p. 31). However, their investigation of critical thinking in three Iranian ELT textbooks series shows that they did contain some elements of critical thinking.

This combination of findings provides support for the conceptual premise that in order to develop teaching (ELT) materials which at the same time may optimally promote critical thinking skills, authors need to be aware of and understand the concept of critical thinking, so the materials can be designed in stages to facilitate the learning processes. However, the authors' unawareness may also be due to the government's lack of directives on this issue.

To summarise, this chapter has described the representation of critical thinking in Indonesian ELT textbooks and discussed the findings connected to the literature and Indonesian setting. Though the textbooks contain critical thinking questions, textually-explicit questions still dominate the textbooks. Explicit question, however, can be used as a scaffold before moving to critical thinking activities. With a lack of activities encouraging critical thinking in the textbooks, Indonesian teachers are

expected to be creative in creating activities promoting critical thinking. The analytic categories of this study can be used as a guideline, and the questions falling into and outside the category can be used as examples.

Chapter 6: Students' responses to modified teaching materials containing the elements of critical thinking – Findings and discussion

6.1 Introduction

This chapter presents the findings and discussion in reference to the second research question posed in this study, which is:

How do Indonesian students respond to modified teaching materials containing the elements of critical thinking?

The underlying assumption of this question is that critical thinking can be included in an EFL setting (Chiu, 2009; Chiu & Cowan, 2012; Cots, 2006; Dantas-Whitney, 2002; Daud & Husin, 2004; Hashemi & Ghanizadeh, 2012; Huang, 2012; Sokol, Oget, Sonntag, & Khomenko, 2008; Yang & Gamble, 2013; Yang & Wu, 2012) and that Asian secondary school students are ready for the teaching of critical thinking so their skills can be enhanced and developed (Che, 2002; Fung & Howe, 2012; Lam, 2012; Rumpagaporn & Darmawan, 2007; Wang & Woo, 2010; Yang & Chung, 2009; Yang & Wu, 2012).

To investigate the second research question, the study conducted a qualitative analysis of text-based responses and interviews. The text-based responses in this study were students' written answers to modified reading questions that incorporated the elements of critical thinking taken from the predetermined analytic categories. Interviews were utilised to investigate students' perception of the modified teaching material and their opinion on thinking activities in the classroom.

This chapter consists of five sections. The first section, this section, introduces the chapter. Section two outlines the findings of the written responses, followed by the findings of the interview in section three. Each written response from 75 participants of four different schools (public school A, public school B, private school A and private school B) is compared. None of the excerpts of participants' written responses presented in this chapter have been edited. The responses were

rated based on the coding/rating rubric presented in the methodology chapter. The excerpts of interviews presented in this chapter have been translated into English, and the quantitative data and charts of interview findings are also presented. Section four discusses critical thinking and non-Western students, and the final section discusses critical thinking, religious beliefs and cultural background.

6.2 Students' written responses to modified reading questions

As mentioned earlier, questions were developed based on the predetermined analytic categories. The aim of questioning students was to find out whether they could answer critical thinking questions in an EFL context. The results were analysed using the coding rubric and classified into three categories: unacceptable, acceptable and good. Responses were categorised as 'good' when they were clearly understandable, supported by students' original thoughts and showed students' motivation to expand their ideas; thus 'good' responses were considered critical responses. Each question and its findings (students' original responses) is presented below.

The first question is the question of clarification: *What does the writer mean by "the planet's rainforests are placed under increasing threat of destruction" (paragraph 1 lines 5-6)?*

Two out of the 22 students in public school A did not answer this question, so 20 responses were analysed to investigate whether they clarified the meaning of the clause. There was a variety of responses, ranging from short and uncritical to long critical responses. Four responses did not appear to answer the question, as can be seen in the following excerpts:

It means that the writer reminding us to keep rainforest.

The rainforests are decreasing more and more due to the destruction of rainforest itself.

Because the number of people on the planet increase each year, the number of forest product also increase and they cut down tree.

The rainforest in our planet are essential to our life and also provide a rich variety of economic resources.

The four responses above, therefore, were labelled ‘unacceptable.’ Seven other responses, even though they were short, answered the question and gave clarification of the meaning of the clause. Four examples are provided below:

It means that the rainforest are in its edge of extinction because of destruction.

Our rainforest is under threat and danger of destruction.

The rainforest becomes decreasing more and more due to the economic activities.

It means rainforest in this planet threatened by destruction/economic purpose.

Eight other longer responses answered the question and could clarify what the clause meant. Two examples are presented below, and two other responses can be seen in Appendix 7.

The meaning of “the planet’s rainforests are placed under increasing threat of destruction” is rainforest in the rich countries has decrease because of the economic of that countries demands grow so they build so many industries for increase their economic and as long as the time began the rainforest will be lost.

What he means by “the planet’s rainforest are placed under increasing threat of destruction” is he want to explain that the rainforest are become rare and disappear day by day because of the destruction.

Responses from 15 students of public school A were labelled ‘acceptable’ because they were understandable and answered the question. However, the responses lacked depth, and the students showed little motivation or ability to support their answers. One student of public school A clarified the meaning of the clause and showed a critical response. The pupil also showed motivation to expand the idea by presenting original thought. Therefore, the response was considered ‘good,’ as can be seen in the following excerpt:

The writer explains that the way society uses the advantages of rainforests for its resources has put the rainforests in a danger situation which is the threat of destruction. Because people only take its advantages without even thinking about how to keep the rainforests’ habitat normal and not causing any damage into it.

In general, most students in public school A could answer the question, in a sense, as they could clarify what the clause meant; however, only a few students could respond in a critical way.

In public school B, there were 23 students, and one student did not answer the question. Four out of 22 responses were considered ‘unacceptable’ since their responses did not answer the question and clarify what the clause meant. The unacceptable responses are as follows:

Rainforest rich countries.

The dilemma facing many rainforest in rich countries.

I think we need product from rainforest for example wood and wood can finished.

The writer mean if the world economy does not continue to increase, gradually the rainforest will be in dangerous condition.

On the other hand, there were 17 responses that did answer the question and, even though most of their responses were short, they appeared to clarify what the clause meant. Three examples of acceptable responses can be seen in the excerpts below, and two other responses can be seen in Appendix 7.

The writer mean that the rainforests on earth are now being destructed continuously.

That’s mean the rainforests are on the way to extinction or disappear because of the exploitation.

The writer means the economic resources provided by the world’s rainforests are enormous or extremely large in number. And it’s always used and used.

One response not only answered the question and provided clarification but also showed criticality. This response is below:

The planet’s rainforest are placed under increasing threat of destruction because every day many people cut the trees in rainforest, ranging from agricultural to urban and industrial use. They are not responsible of destruction in rainforest. We should keep our earth especially rainforest.

Similar to the responses of public school A, most responses in public school B also showed that students could answer the question to an acceptable level; however, there were only a few responses showing criticality.

Referring to private schools, all students of private schools A and B answered the question. All responses from students of private school A were acceptable as they showed clarity and explained what the clause meant. However, similar to the responses from students of public schools, the responses from students of private school A also lacked depth and were without original thought. There were 15 responses altogether, and three of them are presented below. Other responses can be found in Appendix 7.

It mean the rainforest can be damaged due to lack of supervision.

Its mean that rainforest are in trouble because nobody protect the area and government sold the area. So, the rainforests will pass away.

In my opinion, it means the planet's rainforests will be destroyed, because governments and industry groups will destroy the rainforests for their advantages.

As mentioned, all students in private school B also responded to the question.

However, two out of 15 responses were unacceptable since their answers seemed to go in the wrong direction. One response only copied from the original text. The two responses are:

The dilemma facing many rainforest – rich countries, including Australia, is that, as these economic demand grow.

Author means they will put away the rainforest from the threat.

There were 13 responses coded as ‘acceptable.’ The answers, similar to the acceptable responses above, answered the question and clarified what the question asked them. The motivation to support and expand the answer, however, did not appear. Four examples are presented below:

Many rainforest damaged resulting of the economic because much can be gained from the rainforest.

Many rainforest damaged because of the economy.

The writer mean is that the dilemma facing many rainforest because economic demands grow.

I think the intent of the writer is, rainforest under threat and will suffer destruction or damage.

One student's response, however, showed criticality. The response restated the question, mentioned the problem and stated the cause; therefore, it was coded 'good.' The answer is as follows:

I think that what the writer meant was that our economy has made this problem for the rainforests. The increasing threat of destruction has affected the rainforest due to the economy of the world.

The majority of students from both public and private schools could respond to the question asking for clarification. Though only a few students could present critical responses, other students had showed that they could provide clarification, which is one of the elements in critical thinking skills. The following figure illustrates the number of all responses to the question of clarification.

Figure 6.1 Pie chart of students' responses to question of clarification

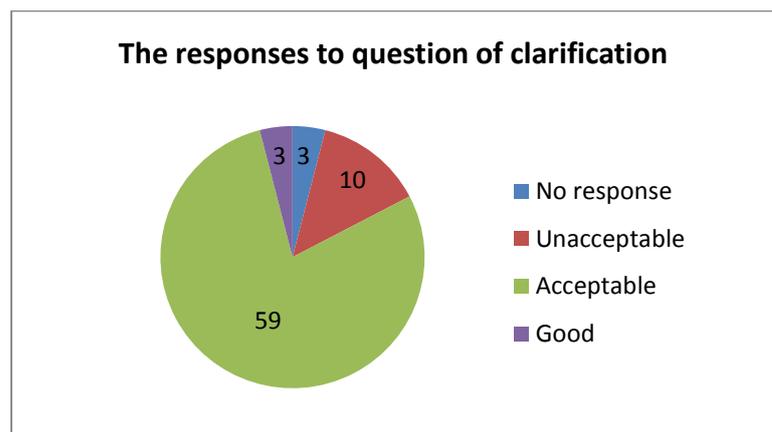


Figure 6.1

The second question is the question that probes assumption: *What do you assume from paragraph 2?*

One student of public school A did not give a response, so 21 responses were analysed. One answer had to be labelled as ‘unacceptable’ as it only copied the original text, but 17 other responses were deemed ‘acceptable’, meaning that they could answer what the question asked. Three examples are presented below, and other acceptable responses can be found in Appendix 7.

I assume that 50 per cent of the world’ food supplies originate in rainforest areas. It means that we really need the rainforests for our food daily.

If the rainforests keep decreasing, the world will lose \pm 50% supplies of food. And starvation may happen all around the world.

From paragraph 2 I assume that rainforests are really important for our food supplies.

Three answers, however, showed that the pupils showed motivation to expand and support their responses, showing elements of critical responses. Therefore, they were rated ‘good,’ and can be seen in the following excerpts:

There are nearly 50% of world’s food supplies were originated in rainforest areas. That number of percentage shows us there are so many foods for our daily need were from rainforest areas.

Nearly 50 per cent of the world’s food supplies originate in rainforest areas. People can buy them from the supermarket but if the rainforest get extinct there will no more food for people. People can make their own garden for food but it still cannot change the rainforest.

The fact that rainforest have a big part in people’s daily life and becomes the most fundamental factor or life supply for humankind. We depend our day-to-day life to rainforests, even more our primary needs are all originated or come from rainforest. Thus, rainforest should strongly be every human’s responsibility.

All students in public school B answered the question; however, two out of the 23 responses did not give an expected answer to the question probing assumption, so they were considered unacceptable. The unacceptable responses are as follows:

Too much food supplies in rainforests to the world.

I do agree with the writer because rainforest areas are fertile.

Of the other responses, 21 were labelled 'acceptable' as they answered the question, but none of them showed critical responses. They lacked motivation to expand their answers. Three examples of acceptable responses are presented below, and the other two responses can be seen in Appendix 7.

I assume that rainforest is important for us, without it maybe we will less food supplies in the world.

I think the rainforest is very important to civilization because it contains so many food material that important for human and animal.

I assume that we are, as a human who needs food to hold out the life, couldn't be far from the rainforest.

In the case of private schools, all pupils from both private school A and private school B responded to the second question asking for assumptions. Most responses were labelled 'acceptable,' but none seemed to offer critical responses. Three responses from private school B, however, were labelled 'unacceptable' as they only copied from the original text. Two examples are as follows:

Nearly 50 per cent of the world's food supplies originate in rainforest area.

That 50 per cent of the world's food comes from the rainforest.

Four examples of acceptable responses from students of private schools A and B can be seen in the following excerpts:

Almost 50% of the world food supply originate in rainforest area. So if the rainforest keep decreasing, the food supply will be decreasing too.

I assume that people's food supplies originate in rainforest area. When the rainforest gone, world will be gone too.

It is true that nearly 50 per cent of the world's food supplies originate in rainforest areas. I think we as human needs food supplies from rainforest areas. If rainforest is gone then human will be hunger.

Assuming that 50% of the world's food supplies comes from the rainforest. This means without them, our food supplies will be taken away by 50%. Look after the rainforest is what we should do.

Similar to the first question, the majority of students from the four different schools responded appropriately to the question asking for assumptions. The responses were understandable and answered the question. However, only a few showed a motivation to expand and support their answers, as can be seen in the Figure 7.2 below:

Figure 6.2 Pie chart of students' responses to question that probes assumption

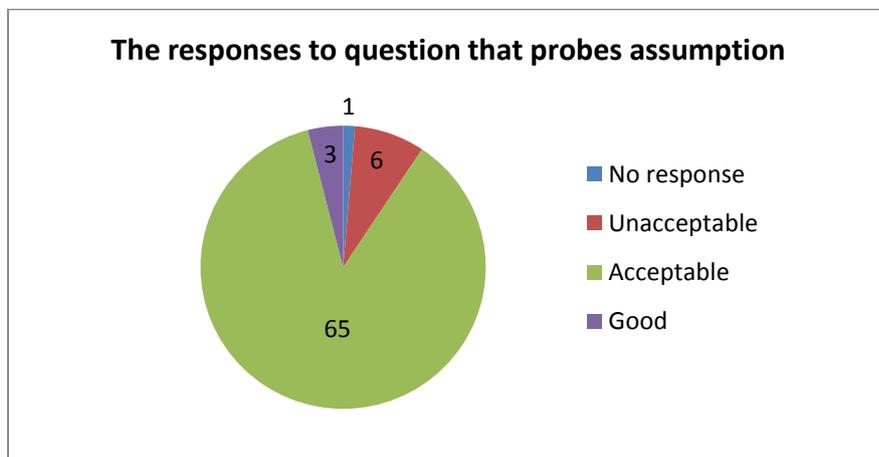


Figure 6.2

The third question is the question that probes reason and evidence: *What evidence does the writer use to say that “rainforests provide many products used by the community for urban development”?*

All students in public school A responded to this question. One response had to be labelled ‘unacceptable’ as it failed to provide evidence, and that response is:

Because if there is no rainforest there is no timber, no wood chips, no frame, no table, etc.

The other 20 responses answered the question and identified the evidence in the reading passage, but they were considered to be ‘acceptable’. Two examples of the acceptable responses are presented below, and two other responses can be seen in Appendix 7.

Rainforest provide a lot of building materials for house framing, furniture, fencing etc. and also supply wood chips used in making cardboard, toilet tissue etc.

Rainforest provide many products for urban development, these include timber converted into building materials for house framing, furniture, fencing, and also supply wood chips and the pulp.

There was one response, however, which was written in good sentences, even though it was not supported by the pupil’s original thoughts, it showed a motivation to expand the idea and was, therefore, coded ‘good.’ This response can be seen below:

As you can see from paragraph 5, rainforests provide timber that converted into building materials for house framing, furniture, fencing, etc. And they also supply wood chips that used in making cardboard & papers. And mostly, daily need such as toothpaste, cosmetics, deodorant etc are produced from plants growing in rainforest area.

Of the 23 students in public school B, one student did not provide a response to the question probing evidence, and one response was labelled ‘unacceptable’ as it was only a copy from the text. The other responses identified evidence for the answer asked and were considered ‘acceptable’. Three examples of acceptable responses can be seen in the following excerpts:

Rainforest supply timber converted into building materials for house framing, furniture, fencing, panel product and flooring. And also supply wood chips, toilet tissue and the pulp used for some papers.

Rainforest provide many products used for urban development such as timber converted into building material for house framing, furniture, fencing and flooring.

The evidence is timber converted into building materials for house framing, furniture, fencing, panel products and flooring.

One student of private school A did not provide a response to the question. The other 13 responses were coded as ‘acceptable’ due to reasons similar to the responses above. Three examples of acceptable responses are provided below, and two more responses can be found in Appendix 7.

These include timber converted into building materials for house framing, furniture, fencing, panel products and flooring.

The evidence are that there are building materials was made by timber for furniture, fencing and the other.

The rainforests provide many products used by the community for urban development such as materials for building and many type of foods for use.

Most of the responses from pupils at private school B were also deemed acceptable. One response was unacceptable as it did not provide evidence and so failed to answer the question. The other 14 responses answered the question, though they all failed to expand the ideas. Therefore, they had to be categorised ‘acceptable’ only. Three examples of acceptable responses can be seen below. Two other responses can be found in Appendix 7.

From sentence “timber converted into building materials for house framing, furniture, fencing, panel products and flooring”.

The evidence is house framing, furniture, fencing, panel products and flooring.

Because product are include timber converted into building materials for house framing, furniture, fencing, panel product and flooring, and also supply wood chips.

Responses to the question probing reasons and evidence were mostly acceptable, as seen in the previous responses. Very few pupils presented their original thoughts or showed motivation to develop their responses. The following chart (Figure 7.3) illustrates the students’ responses to the question probing reason and evidence. As seen in the figure, there was only one student in this category who gave a ‘good’ response.

Figure 6.3 Pie chart of students' responses to question that probes reason and evidence

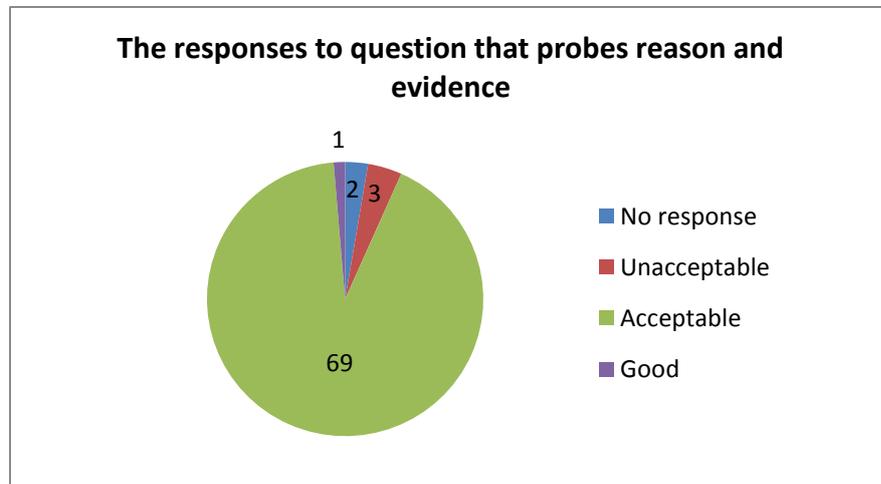


Figure 6.3

The fourth question is the question about viewpoint/perspective: *What is your opinion about “sustainable development”?*

Of the 22 responses from students of public school A, four students did not answer the question and two responses were considered unacceptable as they did not answer what the question asked, as can be seen in the excerpts following:

Rainforest under the threat.

That great opinion to decrease the rainforest under increasing threat of destruction.

12 responses fell into the ‘acceptable’ category as they gave appropriate responses and presented viewpoints without showing any motivation to expand their answer. Two examples of acceptable responses are provided below and other examples can be seen in Appendix 7.

It is a must thing to do so we keep our balance between the way we are currently using our rainforest and the future availability of these resources.

My opinion about “sustainable development” is the balance between something we use now and the future availability of the resource.

Even though there were four students who did not answer the question, there were three responses that were categorised as ‘good.’ The responses showed that the pupils had motivation to expand their ideas. The responses are as follows:

Sustainable development should be define as mutual common that both human’s need and natural habitat could be benefited from. Both sides should compulsory get the same advantages. However, human as the organizer of this issue holds bigger responsibility and duty for the maintenance of the rainforest habitat.

Sustainable development, I think it is a responsibility system to keep the existence of rainforest. So, if we logging the tree from a rainforest, we must plant a new tree. So, the tree in rainforest won’t decrease and make the extinction of rainforest. Unfortunately, people hardly do this system and it make the rainforests become decrease, decrease, and decrease.

I think sustainable development is important and should be done for balancing our needs because sustainable development also sees for future situation for what will we can do in future with rainforest, not only in short-term perspective.

Different from students of public school A, all students of public school B answered the questions and three responses were considered ‘good.’ The responses showed evidence of motivation to expand the ideas and were supported by the students’ original thoughts. Two examples of good responses are as follows:

There needs to be a balance between the way we are currently using our rainforest and the future availability of these resources. How to increase its industrial development but not mutilate nature and maintaining environmental sustainability.

This is about how we take resources without damaging the home of other creature and nature, how we can balance the resource to take and the population of the resources itself.

Unfortunately one response was unacceptable due to misreading, while the other 19 responses were considered ‘acceptable.’ Three acceptable responses can be seen in the excerpts below, and other acceptable responses can be found in Appendix 7.

My opinion is if we doing sustainable development, we must balancing between we do and the future forest condition.

I think that’s great idea. We can keep the rainforest because the forest are very crucial to support many aspects of life.

I think the development of how the rainforests being planted is good for the planet and other many living things.

Regarding responses by students from private schools, five from private school A were labelled ‘unacceptable’ because they went in the wrong direction. Two examples of the unacceptable responses are presented below, and other examples are listed in Appendix 7.

Animal habitat will gone, the chain of food will broken, the temperature will increase, the pole ice will melt, the sea level will increase, the island will sink.

People will lack many foods and rainforests will lost.

The remaining responses from private school A were rated ‘acceptable’ and no response fell into the ‘good’ category. Three acceptable responses can be seen in the following excerpts:

Sustainable development aims to improve a bad situation into good.

We must protect the rainforest areas because it’s important for us. If we cut the trees, we must plant it back.

The development will never ending and because of that, the habitat for animal will extinct and resources will be gone.

With regard to private school B, one pupil did not write a response, and two responses were considered ‘unacceptable’ because they did not answer the question but simply copied from the text. The unacceptable responses are as follows:

Sustainable development is destroy rainforest for a few square kilometres each year for economic purpose.

Scientists believe that over 200,000 square kilometres of rainforest are being destroyed each year for economic purpose.

However, one response was ‘good’ as it showed the pupil’s original thought and motivation to support their idea, as can be seen below:

I think that the sustainable development for the rainforest would be good for the future of the rainforest. It would help to look after the rainforest better and reducing the damage to the animals and other creatures living there, instead of permanently damaging the forest.

The remaining 11 responses from students from private school B were ‘acceptable.’ Two examples of the acceptable responses are presented below, and three other examples can be found in Appendix 7.

Maybe sustainable development is like creating something that can preserve the environment in a long time such as forests and home for animals.

My opinion is rainforests are the economic importance but there needs to be a balance between the way we are currently using our rainforests and the future availability of these resources.

Different from the previous questions, the question about viewpoint/perspective produced seven good responses. However, the number of students who did not provide a response was also greater than in the previous questions. The following chart illustrates the students’ responses to the questions about viewpoint or perspective.

Figure 6.4 Pie chart of students’ responses to question about viewpoint or perspective

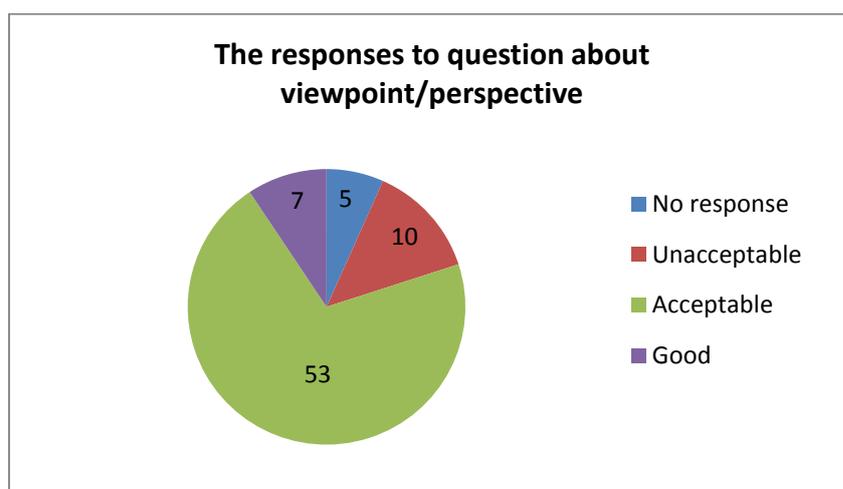


Figure 6.4

The fifth question is the question that probe implications, consequence and alternative: *What are the consequences if there is no more rainforest?*

One out of 22 students from public school A did not provide a response but in those that were received no response was deemed ‘unacceptable.’ Two responses were good, while 19 responses were labelled ‘acceptable.’ The two good responses are as follows:

There are many consequences if there is no more rainforest, we can't provide our food, medicines, industrial products anymore and we don't have any resources to develop our life.

There will be no food (mostly vegetable and fruits), there will be no natural sites, global warming, water stock, no plants that can be used for medicine, no urban development, no oxygen, we have no plants to absorb carbon dioxide, etc.

Three examples of ‘acceptable’ responses from the students of public school A are provided below, and two more examples are listed in Appendix 7.

If there is no more rainforest, we wouldn't have any food resources, wouldn't get wood, medicine, building products easily, and we couldn't have a recreation in the rainforests anymore.

The consequence if there is no more rainforest is: we lose everything that rainforests provided in the past and lack of O₂ resources.

Human will lose their needs and life's balancing.

From public school B there were three responses that fell into the ‘good’ category as they clearly showed the pupils’ motivation to expand their ideas, and one response was written in good sentences. The three critical responses are as follows:

We discovered previously that rainforests are essential to our life on earth. They also provide a rich variety of economic resources that are used all over the world. If there is no more rainforest, some countries threat of economic crisis and if these continue surely creature will be dead.

Our planet will be so hot, because rainforest is heart of the earth. And we will not enough food because rainforest contains many food. Disadvantage will also experienced by people in the future.

If there is no more rainforest, the world will be soon to break down totally. Why do I say so? Because the weather will be unstable and oxygen from nature for the living to breath will be less supplied. Then, the living things will be extinct soon.

20 responses from students of public school B were rated 'acceptable,' with no response falling into the 'unacceptable' or 'good' categories. Three examples of acceptable responses are presented below, and two other acceptable responses can be found in Appendix 7.

Living things that exists in the rainforest will likely die because it's difficult to get a place like rainforest.

The consequence if there's no more rainforest are we not have popular places, decreasing of food originate from there.

The earth will become so hot, can't supplies any foo to the world's, we can't visit to look the natural beauty, we not found the medicines and drugs etc.

Turning now to private schools, all students from private school A answered the question about consequences. One response was considered 'good,' and the others were 'acceptable.' The good response can be seen below:

We will lack the world's food supplies in rainforest areas, and then people can't take part in activities such as fishing, bush-walking, rock climbing, and four-wheel driving. And of course we will lack the medicines and drugs.

Three excerpts below are examples of responses falling into an 'acceptable' category from students of private school A. Two other examples can be seen in Appendix 7.

No more fresh air, the tree that provide oxygen and carbon dioxide. The animal don't have place for live.

The world don't have the jungle, it will global warming because many pollution by the transportation, may be environment will damaged.

We will lost foods, woods and no more building materials. We lost even everyday products such as toothpaste, paints and deodorants.

Similar to students from other schools, all students of private school B answered the question. Nevertheless, none of the responses fell into the ‘good’ category—they all fell into the ‘acceptable’ category. Three examples are provided below, and other examples of acceptable responses can be found in Appendix 7.

No more foods, recreation, medicines and drugs, industrial and building products.

If there is no more rainforest, there will be erosion because there are no roots to handle the rain and there will be no home for animals.

It would permanently damaging the home of other plants, animals, soil and river.

The chart below (Figure 7.5) illustrates the categorisation of students’ written responses to the question asking about implication, consequence and alternative.

Figure 6.5 Pie chart of students’ responses to the question that probes implication, consequence and alternative.

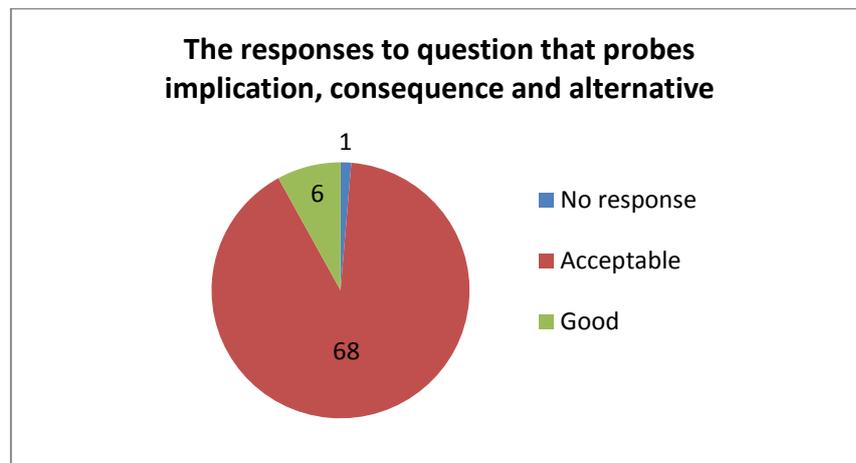


Figure 6.5

The sixth question is the question about the question: *What does question number 5 ask you to do?*

There were two pupils of public school A who did not answer the question, and two other responses fell into the ‘unacceptable’ category, as they did not answer the question at all, as can be seen below:

I will plant the tree.

I will plant the tree and ask the people do it too.

However, one response was considered ‘good.’ That response is:

To look up to the future of how the extinction of rainforest will impact the world’s ecosystem as a whole. And to look back on what have we done to this habitat so far, evaluate and work better for the nature.

The remaining 17 responses were acceptable as they were able to answer the question but lacked depth and original thought. Three examples of the acceptable responses can be seen in the excerpts below, and two other responses can be found in Appendix 7.

To find the consequences if we don’t have any rainforest.

Ask me to write the consequences if there is no more rainforest.

To think what is the consequences would we face if there is no more rainforests.

Unlike students of public school A, all students of public school B answered the question. However, two responses also had to be labelled ‘unacceptable’ because they did not answer what the question asked, as can be seen in the following excerpts:

I have to do use tissue or paper less.

I will to do recycle my thing, and I willing support of sustainable development.

21 other responses from students of public school B were considered ‘acceptable.’ Three examples of the acceptable responses can be seen in the excerpts below, and two other examples can be found in Appendix 7.

The writer ask what are consequences if there is no more rainforest.

It asked me to write what would happen if there are no more rainforest in this world.

It asks me to explain the effects if there's no more rainforest and remind me that people have to do something to make it not happen.

One student from private school A did not answer the question, and two responses from private school B were considered 'unacceptable.' One response was a copy from the text that was not related to the question, and the other did not answer the question. The unacceptable responses are as follows:

I would prevent the sustainable development and will maintain tropical rainforest.

The overuse of rainforest for tourist activities has led government to pass laws restricting activities in these forest.

14 responses from private school A and 13 responses from private school B were rated 'acceptable' and there were no responses placed in the 'good' category. Three examples of acceptable responses from both private schools can be seen in the excerpts presented below, and three more may be found in Appendix 7.

Question number 5 ask me to do keep the preservation of tropical rainforest to avoid dangerous consequences.

To keep save rainforest by plant some trees for our life and next generation.

Number 5 tell me to keep this world's rainforest from destruction.

The findings show that responses to 'question about the question' were not very different from those for other questions, with the majority of responses falling into the acceptable category. The following chart illustrates the students' responses to the question about the question:

Figure 6.6 Pie chart of students' responses to question about the question.

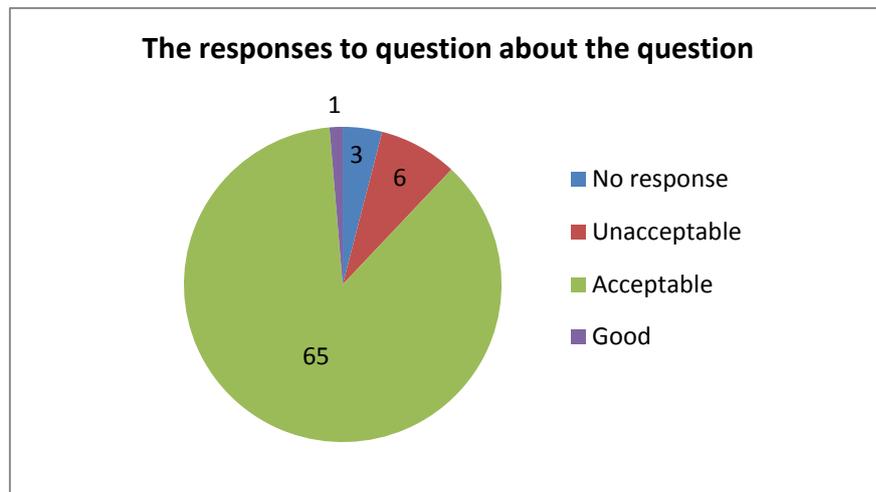


Figure 6.6

The seventh question is the question about prediction: *What do you predict if sustainable development is not applied?*

Two out of 22 students from public school A did not give a response. One response was presented in good sentences. The student who gave this response also showed motivation to expand his ideas. There was an attempt to present his own thoughts; it was, therefore, labelled 'good,' as can be seen in the following excerpt:

The rainforest will be extinct along with the creature in this world because of the natural destruction that has impacted the ecosystem as a whole. In the end, human will lose its natural resources and will have a lot of difficulties in getting the right place to get their source of needs in the future.

The remaining 19 answers from public school A were rated 'acceptable' as they did not go beyond an 'understandable' level and did not show original thoughts or make an effort to explain their answers. Two examples of the acceptable responses are provided below, with other examples listed in Appendix 7.

What I predict if sustainable development is not applied is lack of food supplies, medicine supplies etc.

If sustainable development is not applied, the people of our future will lack of foods, recreation, medicines, industrial and building products, etc.

All students of public school B answered the question. Two answers, however, were labelled 'unacceptable' because they did not answer the question, as can be seen below:

Yes, because the tree in the forest is reduced every day, and many timber thieves who cut down trees illegally.

My predict is the rainforest will be grow.

21 other responses were considered 'acceptable,' and, unfortunately, there were no 'good' responses from students of public school B. Two acceptable responses are provided below, and three more examples may be found in Appendix 7.

The super global warming will be happened in this plant and so many animals will be extinct and maybe it will applies equally for every human being.

I predict that will be permanently damaging the home of other plants and animals, the soil or rivers and creeks.

The responses from private schools were not very different. For example, one student from private school A did not answer the question, and two responses were labelled 'unacceptable.' The two unacceptable responses can be seen below:

The method is not implemented due to lack of human consciousness to preserve tropical forests.

It makes our product useless. If we don't use it for next generation, why not do it?

The 13 remaining responses were considered 'acceptable.' Two examples of acceptable responses may be seen in the excerpts below, and two more can be found in Appendix 7.

I think if sustainable development is not applied will not good for the rainforest because it can make the rainforest destroyed.

I predict that the rainforest in the world will disappear.

All students from private school B answered the question and, similar to students of private school A, there was also no ‘good’ response nor was there an ‘unacceptable’ response found. The responses were all considered ‘acceptable’ as they lacked original thought and showed no effort to expand their answer. Two examples can be seen below, and three more can be found in Appendix 7.

I would predict that if sustainable development is not applied, the rainforest would go extinct.

I predict that if sustainable development is not applied, the rainforest would slowly go extinct and that the economy of the world would be affected.

The pie chart below (Figure 6.7) illustrates the composition of students’ responses to the question about prediction.

Figure 6.7 Pie chart of students’ responses to question about prediction

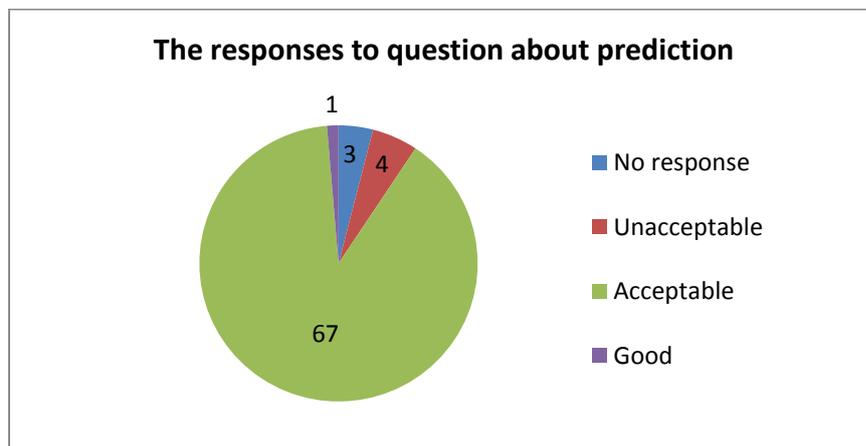


Figure 6.7

The eighth question is the question about agreement and disagreement: *Do you agree with the writer? Why?*

There were three students from public school A who did not respond to the question. One response fell into the 'good' category as it showed the student's original thought about the text, as can be seen below:

Yes, because it has showed and emphasized me now the rainforest hold a big role in my daily life and other humans too. It also completed with a lot of facts, statistics and strong arguments too that can literally convinced me to agree with it.

The other 18 responses were 'acceptable.' Two examples of them can be seen in the excerpts, and other examples can be found in Appendix 7.

Yes, I'm totally agree with the writer. Because that's the fact. It's true that rainforests already help us a lot. And I'm sure without rainforest, our life wouldn't be this easier.

Yes of course I agree because the writer wrote based on the fact.

With regard to public school B, one response was categorised as 'good.' That response is as follows:

Yes, I agree because the critical argument of the writers really can make me aware how important the rainforest is.

Unlike public school A, all students of public school B answered the question; however, there was no response labelled as 'unacceptable' and the 22 other responses were 'acceptable.' Two examples of the acceptable responses can be seen below, and more can be found in Appendix 7.

I guess yes, because rainforest is important for all people in the world, and almost people would acknowledge the economy of rainforest.

I do agree because the evidence that the writer has given is totally true. Many things that we get from rainforests.

All 15 students of private school A answered the question, and all of the responses fell into the 'acceptable' category. Two examples of the responses can be seen in the excerpts below, and more examples can be found in Appendix 7.

Agree, because he has a nice argument about this topic.

Yes, because the writer try to tell us to protect the rainforest areas from this text that consist of many bad cause.

One student from private school B did not answer the question while the other responses were rated 'acceptable.' No good response was found in this category, two examples of the acceptable responses are provided below, and others may be seen in Appendix 7.

Yes, I agree because earth has more oceans than land, so if the rainforests are destroy, than damage can be everywhere.

Yes, because we have to preserve the forest so that there'll be a balance between the way we are currently using our rainforest and the future availability of these resources.

In this category there were no unacceptable answers received even though there were four students who did not answer the question. The pie chart below (Figure 7.8) illustrates the students' written responses to the question about agreement and disagreement:

Figure 6.8 Pie chart of students' responses to question about agreement and disagreement

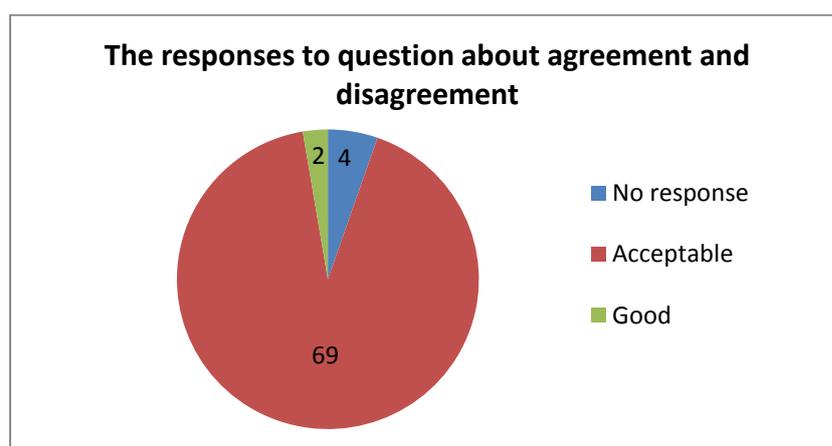


Figure 6.8

The last question is the question about summary and conclusion: *What can you conclude from this passage?*

The question about summary and conclusion was the last category of critical thinking questions. Two students from public school A did not answer the question, but two other students provided responses deemed ‘good,’ as can be seen in the following excerpts:

The conclusion is we, human as the developers of nature shouldn't just take natural resources for granted, we also have to keep it from destruction so that natural ecosystem won't get damaged by our action. By maintaining the habitat of rainforest, we will also get a lot of more advantages from it and will not lose our very fundamental service of life.

We must appreciate nature and don't exploit them to our pleasure. We must think before we act. Think all the consequences from action what we will do.

The remaining responses were rated ‘acceptable,’ and two examples of these are presented below. Some more responses can be found in Appendix 7.

I can conclude that rainforests gave us many advantages in life and yes we have to take good care for it for a better future.

Rainforest is very important for our life that can support many aspects of life and we should preserve them.

Of the responses from public school B 20 were labelled ‘acceptable,’ while three responses were considered ‘good.’ The three good responses are as follows:

My conclusion from this passage is many things that we get from rainforest for our aspect of life. We have to keep it for a better place and for a better future. Don't be greedy. We live for keeping each other, include keeping the rainforests.

The conclusion is rainforest is very important. It provide some of the most important thing in the world such as food, medicine, industrial product, etc. We need to do something to keep it. If we don't do something fast, the rainforests will completely gone before we know it.

I can conclude that most of our needs originate in rainforest and because it is being destroyed continuously, we have to find a way to keep the supply and the demand balance, and keep out the rainforests from extinction.

Two examples of student responses that were categorized as ‘acceptable’ can be seen in the excerpts below and additional examples may be found in Appendix 7.

My conclusion is the rainforest really important for all living and we, the next generation must keep the rainforest existence.

We conclude that we have to preserve rainforests because they are very crucial to support many aspects of life.

One student from private school A did not provide a response while all students of private school B did. However, there were no ‘good’ responses found from either school group. There were also no ‘unacceptable’ responses received. Three examples of acceptable responses from both schools can be seen in the excerpts below and more can be found in Appendix 7.

The people must protect the nature, not too much exploitation this nature because it can be damage.

The people must support many aspects for the better life.

I conclude, the rainforest is important for us. We could live till now cause of rainforest. So we must save it.

Responses to the last question developed from the predetermined analytic categories were similar to those of the other questions. The majority of students presented only ‘acceptable’ responses though there were a few critical responses received. The figure below illustrates the number of students’ responses to the question about summary and conclusion in each category.

Figure 6.9 Pie chart of students' responses to question about summary and conclusion

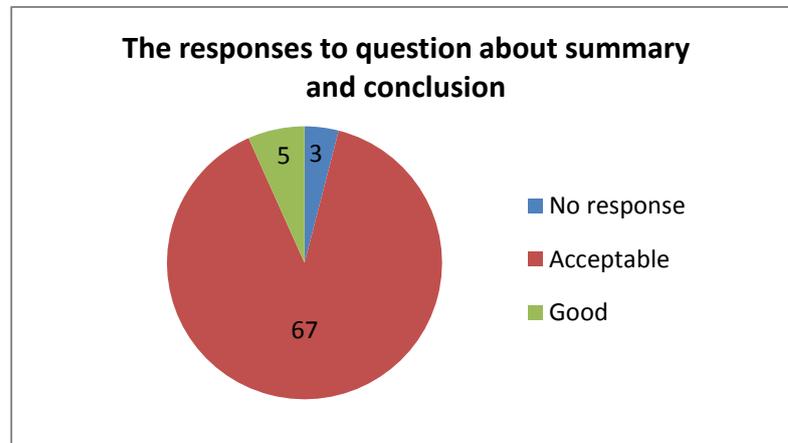


Figure 6.9

In sum, there were 75 students from two public schools and two private schools who were asked to answer nine questions developed from the elements of analytic categories used to investigate the Indonesian English textbooks. Altogether, 675 responses were analysed using the three criteria generated as mentioned above. Not all students answered all the questions; however, the number of abstentions was small. Some responses fell into the 'unacceptable' category as they could not be understood or did not answer the questions asked. Most answers fell into the 'acceptable' category, and a few answers were considered 'good.' The full results of students' written responses to the critical thinking questions are illustrated in the following table and charts:

Table 6.1 The number and percentages of students' responses to modified questions

Table 6.1

No	Criteria	Number	Percentage
1	No response	25	3.70%
2	Unacceptable	39	5.78%
3	Acceptable	582	86.22%
4	Good	29	4.30%
	Total	675	100%

Figure 6.10 Column chart of students' responses to modified questions

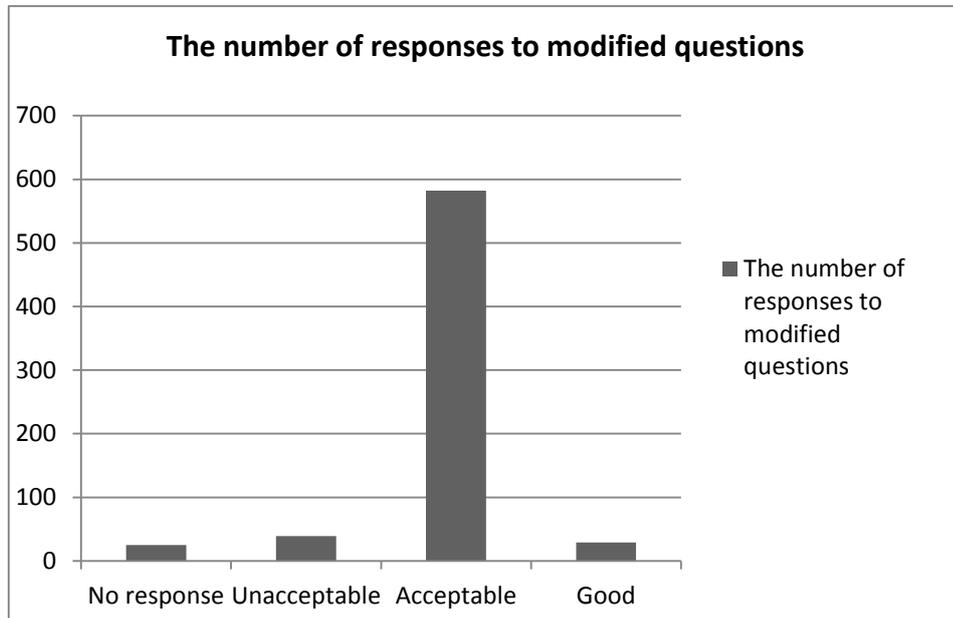


Figure 6.10

Figure 6.11 Pie chart of students' responses to modified questions

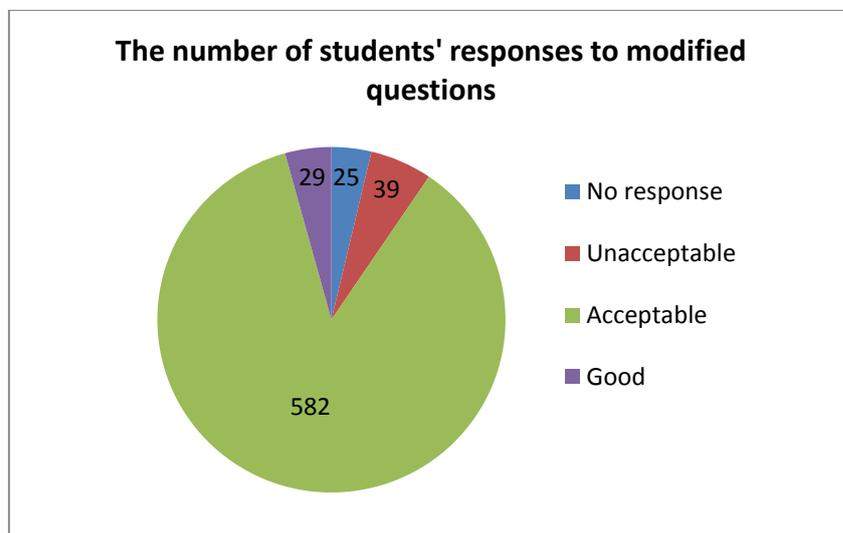


Figure 6.11

The results of this study show that the majority of students were capable of providing 'acceptable' responses. This means that the responses were understandable and able to answer what the questions asked; however, they still

lacked depth. The students showed little motivation or ability to support their answers. Therefore, no original thought was found.

On the other hand, a small number of students did provide ‘good’ responses. As mentioned, 29 out of 675 responses (4.30%) fell into this category. A response was considered ‘good’ if it was clearly understandable and answered the questions asked in well-constructed sentences. The response was supported by students’ original thoughts and showed a motivation to expand, explain and clarify their ideas by adding more information. Students did not just copy the idea from the text but attempted to present their own ideas. The existence of ‘good’ responses shows that there are critical thinking elements in a small number of students’ written responses. It can be inferred that Indonesian students have the potential to be critical; therefore, ‘acceptable’ responses may be improved if students are given adequate training in their coursework.

That the majority of students were only able to present ‘acceptable’ responses may be explained by the fact that critical thinking has not been pervasive in Indonesian education until this point, especially in the teaching of English as a foreign language. As such, these students are not accustomed to providing an answer supported by reasons, examples, or more explanation. The findings are consistent with the existing literature regarding teaching practices in Indonesia.

The literature has detailed a survey by Coleman et al. (as cited in Lamb & Coleman, 2008) that found that Indonesian teachers still adopt a very traditional teaching methodology in all subject areas. For example, teachers read aloud from books, dictate, or write on the blackboard while students listen and copy. A study by World Bank in 2007 (as cited in Lewis & Pattinsarany, 2011) showed that Indonesian junior secondary school students were poor in problem solving. Nilan (2003) found that rote learning still dominated teaching approaches, while Pikkert and Foster (1996) proved that the critical thinking skills of third year students at a university in Indonesia were below the critical thinking skills of university students, and even secondary school students, in the USA. This shows that Indonesian students may not have been exposed to activities asking them to give opinion and support argument. It also seems possible that the results of the present study, in which the

majority of students' written responses fell into the 'acceptable' category and a few were deemed 'good' responses, are due to teachers' ignorance about critical thinking pedagogy. As the findings also show that some students were able to give critical responses, it can therefore be assumed that it is possible to improve the Indonesian students' critical thinking skills.

6.3 Students' responses to the interview

As mentioned, interviews were conducted to investigate students' thoughts on reading activities they had completed and their perceptions of critical thinking-related activities in the classroom. The findings helped to ascertain the extent to which Indonesian students were prepared for the teaching of critical thinking skills.

From public school A 10 out of 22 students (45.45%) and 10 out of 23 (43.47%) students from public school B were interviewed directly after they answered the modified questions. From the private schools, 7 out of 15 students (46.66%) from private school A and 10 out of 15 students (66.66%) from private school B were interviewed. In total, 37 out of 75 students (49.33%) of all schools were interviewed. They were asked five questions related to the questions they answered previously and the critical thinking activity in the classroom. Each question, and its responses, is presented below. Complete interview transcripts in Indonesian and English can be found in Appendix 8.

The first interview question asked what students thought about the questions in part B, additional questions containing the elements of critical thinking. All students from public school A mentioned that the questions made them think. The majority of students from public school B also expressed the same thing - only 2 of them said that the questions made them think, but a little. All students from private schools said that the questions made them think. Some varieties of student responses can be found in the following excerpts:

Yes, it makes me think and opine (public school A)

Yes, of course (public school B)

Yes, they make me think (private school A)

Yes, but first I read the text, then I developed into my own sentences (public school A)

Yes, part B asked me to think (public school A)

Yes, little (2 responses from public school B)

The second question asked students to identify which questions made them think hardest. As mentioned, there were nine questions developed from the analytic categories, and the degree of ‘difficulty’ in terms of thinking processes may be different; therefore, the study attempted to find which category made students think more deeply.

The findings show that 16 of 37 students (43.24%) said that all questions made them think hard. The following table (Table 7.2) and chart (Figure 7.12) illustrate each question and the number of students who said that the question made them think hard:

Table 6.2 The type of questions and the number of students stating that the questions made them think hard

Table 6.2

No	Type of questions	The number of students	Percentage
1	Question of clarification	25	67.56%
2	Question that probes assumption	24	64.86%
3	Question that probes reason and evidence	20	54.05%
4	Question about viewpoint or perspective	31	83.78%
5	Question that probes implication, consequence and alternative	34	91.89%
6	Question about the question	30	81.08%

7	Question about prediction	34	91.89%
8	Question about agreement and disagreement	35	94.59%
9	Question about summary and conclusion	31	83.78%

Figure 6.12 Column chart of the type of questions and the number of students stating that the questions made them think hard

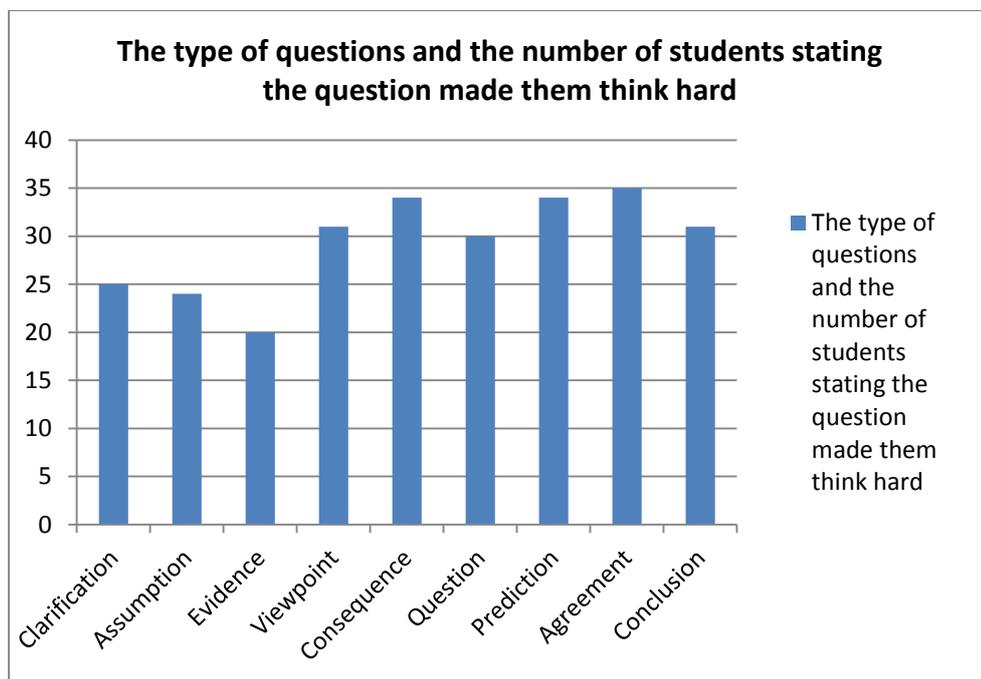


Figure 6.12

Almost half of the students interviewed said that the questions made them think hard. The question that asked students to support why they agreed or disagreed with the author received the highest number of responses that it made students think, followed by the questions asking for prediction and consequence. It is interesting to note that questions asking students to give support to why they agreed or disagreed with something made them think hard. This may be because the students are not accustomed to expressing their opinion.

The third question asked students whether they found any difficulty in answering the questions. The results of this question show that 26 out of 37 (70.28%) students

found difficulty in answering the questions. Only one student (2.70%) said that they found little difficulty. Ten out of 37 students (27.02%) said they did not find any difficulty in answering the questions. The distribution can be seen in the following pie chart:

Figure 6.13 Pie chart of responses to the question asking whether the students found difficulty in answering the questions

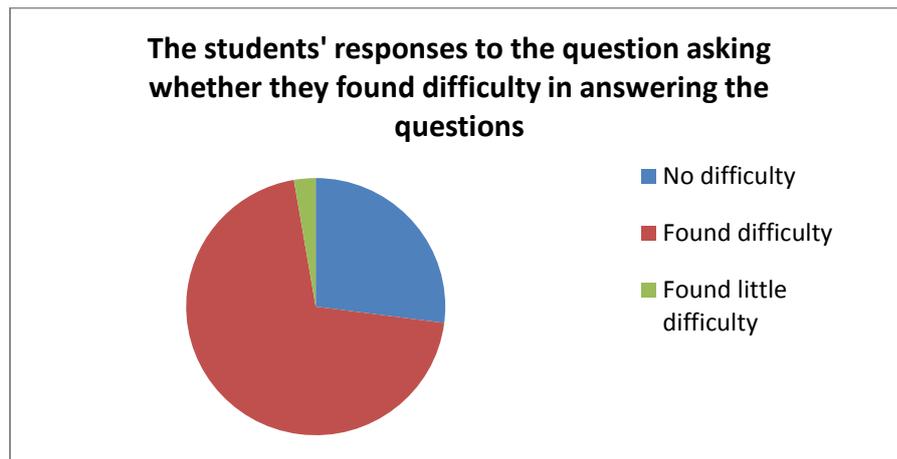


Figure 6.13

When asked in the fourth question what sort of difficulties they had, six out of the 10 students from public school A who said they found difficulty mentioned points such as difficult words, limited topic, grammar and a lack of confidence in English. Four examples of students' difficulties are provided below. As mentioned, complete transcripts can be found in Appendix 8.

I found some difficult words.

My knowledge about the topic was limited.

I think my English was still not good.

Sometimes I found difficulty in using grammar.

The same number of students from public school B also found difficulty in answering the questions. Their responses were similar to students of public school A; their difficulties were mostly related to difficult words and confidence. Three examples are provided below, and more responses can be seen in Appendix 8.

I found difficulty in finding words in English, especially number 3.

There were some questions with difficult words to understand.

I wrote the answers in Indonesian then translated them into English. Sometimes I felt doubtful whether my English was correct or not.

Again, six out of seven students from private school A also found difficulty in answering the questions, and they had similar difficulties to students from public schools such as having a limited English vocabulary. One of them mentioned that he felt he was too lazy to think. Three examples of their responses can be seen below, and more can be found in Appendix 8.

I lacked vocabulary to write comments.

Sometimes I feel lazy to think.

Sometimes I found difficulty in English vocabulary.

Nine out of 10 students from private school B found difficulty in answering the questions. Again, the difficulties were similar to those of previous students, as can be seen in the following excerpts:

I think my English was still not good to write.

I feel my English was not good.

I think my knowledge was not broad.

I feel my vocabulary was not enough.

When categorised, those responses revealed some similarities: vocabulary, limited knowledge of the topic, lack of confidence with English, writing, grammar, reading comprehension, feeling lazy to think. As mentioned, there were 26 students who said that they found difficulty in answering. One student who reported little difficulty said that the difficulty was related to vocabulary. Therefore, he was included in the group of students who found difficulties. Altogether, there were 27 students who reported their difficulties in answering the questions. The table below

lists the distribution of students' difficulties in answering the critical thinking questions:

Table 6.3 The students' difficulties in answering the questions

Table 6.3

No	Kind of difficulty	Number of students	Percentage
1	Vocabulary	14	51.85%
2	Limited knowledge of the topic	2	7.40%
3	Not confident with English	6	22.22%
4	Writing	2	7.40%
5	Grammar	1	3.70%
6	Reading comprehension	1	3.70%
7	Lazy to think	1	3.70%
Total		27	100%

Interestingly, no student mentioned 'thinking' as his/her difficulty. The majority of students said that they found difficulty in their vocabulary. They felt that they did not have enough vocabulary to write their responses in English. This majority was followed by reports from students who said that they did not have confidence in English. They said they were uncertain if their English was correct.

The last question asked students' opinion if in any lesson they were asked to think. During the interview, the researcher did not stop after asking this question. Very often the researcher added phrases such as 'to give opinion,' 'to express your mind,' 'to give argument,' 'to discuss a problem,' 'to debate,' and 'to argue the teacher.' The most striking result to emerge from the data is that all respondents from the four schools (100%) mentioned their agreement. Some responses from students from public school A can be seen in the excerpts below, and more can be found in Appendix 8.

I agree because we need to express our opinion and in the future we have to learn by our own.

Yes I agree, so I can argue the teacher.

It's good because there is communication between a teacher and students.

Yes I agree because we can express our opinion in this democratic country.

Similar responses were reported by the students from public school B with one mentioning 'train logic.' Three responses are shown below, and more responses can be found in Appendix 8.

It's good because we can learn to develop our own mind and everybody has different opinion about a topic.

It's good because it can train our logic.

It's good because so far if we do exercises in the book, it's always the same. We can always find the answers in the text.

The students from private schools gave similar responses. One student from private school A mentioned 'practicing courage' while another mentioned that she felt satisfied that she could think deeply about something. Four responses from the students from private school A can be seen below, and more responses can be seen in Appendix 8.

Yes I agree because I feel satisfied if I can think deeply about something.

I feel happy when we discuss and the teacher asks my opinion.

I agree. I have no problem with activities that ask me to think.

I agree because it can practice our mind and courage.

All 10 students from private school B also expressed their agreement, and three examples of their responses can be seen in the excerpts below. Two more responses can be seen in Appendix 8.

I agree because we have a right to express our opinion.

I agree because it makes students active.

I agree because it can train us to practice our argument.

The findings showed that all participants interviewed said that they agreed that thinking and providing opinions or arguments in their study would be beneficial. All of them also mentioned the importance of those activities for their study and life. The responses show that Indonesian students seem ready for the teaching activities that promote critical thinking skills.

The results of this study found that the majority of students (94.59%) said that the modified questions developed from the analytic categories of critical thinking did make them think. When they were asked about which questions made them think hard, more than half of them said that all questions made them think hard. The word 'hard' was used during interview instead of 'critically' to avoid students' misconception and to express that the students needed to use extra effort during the thinking processes.

The findings also show that the majority of students (70.28%) found difficulties when answering the modified questions. However, the most interesting finding was that their difficulties were not related to thinking processes. They show that the difficulties were primarily due to a limited vocabulary, followed by the students' lack of confidence in answering questions in English and in their grammar. Another interesting finding was that all students agreed that thinking and giving opinions or arguments in their study in all school subjects would be important for their study and daily lives. Thus it can be concluded that Indonesian students are ready for the systematic teaching of critical thinking skills. Their lack of critical thinking abilities, presented in previous sections, may be due to the education system that, so far, has not facilitated the development of the skills necessary.

6.4 Critical thinking and non-Western students

As mentioned in the literature review, there has been a debate on the teaching of critical thinking to non-Western students. Atkinson (1997), for example, claims that critical thinking may not be successful in ELT (the term ELT here also refers to EFL, ESL and TESOL) because the cultural differences between Western and non-Western students make it inappropriate for non-Western students. A similar assertion is also made by other authors (Carson, 1992; Clancy, 1986; Kim, 1985; Kwang, 2001) who claim that critical thinking may be difficult in Asia due to cultural aspects. They claim that Asians are passive, dependent, obedient, empathetic, and communal. Asian students are also believed to be prone to avoiding losing face, obeying and respecting parents and authority figures, and these characteristics are considered factors that inhibit critical thinking.

The characterization of Asian students above is challenged by some authors (e.g Littlewood, 2000; Shi, 2006; Stapleton, 2002) who argue that this characterization of Asian students does not describe their real condition. Their studies prove that Asian students do not want to be passive learners, expect to learn in an interactive classroom, and are ready to question authority (their teachers).

The findings of the current study are consistent with, and corroborate studies by Littlewood (2000), Stapleton (2002) and Shi (2006) and other authors who challenge the characteristics attached to Asian students. Based on the results of the interviews, Indonesian students were not passive and did expect interactive teaching methods in which they could have the opportunity to express their own opinion, discuss things, and argue their point. Students could also answer written critical thinking questions and some showed elements of critical thinking. This combination of findings provides support for the conceptual premise that Indonesian (Asian/non-Western) students have the potential to be critical and can accept the teaching of critical thinking skills. If they lack critical thinking, it may be because the current educational system does not encourage their critical thinking. This is not because they do not have the ability to think critically but because they are simply not taught to do so. Moreover, characteristics such as respecting parents and authority figures,

being loyal to family, and showing empathy do not prove that Asian students' critical thinking skills cannot be improved or that Asian students cannot be critical.

Regarding the teaching of critical thinking, one of the approaches of teaching critical thinking is infusion (Ennis, 1992). This is when critical thinking is infused into school subjects. Another one is general approach in which critical thinking is taught as a separate course. A study by Solon and van Gelder et al. (as cited in Davies, 2006) has revealed that both the general and infusion approaches improved students' critical thinking skills. On the other hand, a study by Angeli and Valanides (2009) show infusion is better than the general approach. This seems reasonable as infusing critical thinking into content, according Perkins (1987), provides more exposure than teaching it alone as a separate course.

With reference to infusing critical thinking into ELT, some English textbooks in Asian countries already contain critical thinking. For example, *New Standard College English*, China's English textbook, contains a 'Critical Thinking' section. *Step Ahead*, Singapore's English textbooks, has included a 'Thinking Strategies' section. *Side by Side*, an English textbook for elementary level learners in the Philippines, contains a 'Thinking' section. *Topnotch*, *Interchange* and *English Files*, the Iranian English textbooks, contain a few elements of critical thinking (Birjandi & Alizadeh, 2013). Though there is very little information as to what extent critical thinking sections in China, the Philippines and Singapore's English textbooks has influenced their education, it indicates that deliberately infusing critical thinking into ELT has been done previously and is possible in non-Western setting.

Results of the current study also show that elements of critical thinking, intentionally or not, have been infused in Indonesian ELT textbooks (See Chapter 5). The Indonesian ELT textbooks may not be different from other textbooks mentioned above even though there is no specific 'critical thinking' section. These findings corroborate the idea that critical thinking skills can be infused into ELT textbooks. Since critical thinking has been included in several Asian ELT textbooks and studies have shown that critical thinking can be infused in a variety of school subjects it can, therefore, be assumed that teaching critical thinking through ELT

(TESOL/EFL/ESL) is possible. As mentioned in the literature review, many studies on critical thinking have been conducted in ELT settings and show positive results. The problem of teaching critical thinking in non-Western countries, specifically in Indonesia, may be connected to teachers who have not yet optimized the existing materials as a springboard for critical thinking activities. This may be due to the teachers' ignorance of the concept of critical thinking and of how to encourage students' critical thinking skills. This may also be related to the government's lack of directives in this regard, as has been previously mentioned.

Furthermore, it has also been stated that it is possible to infuse critical thinking into the teaching of grammar. This seems true as in learning sentence patterns, for example, an ELT learner needs to think critically to make simple, compound, or complex sentences by analysing certain grammatical elements such as coordinate conjunctions, subordinators etc. This supports the idea that critical thinking is already inherent in ELT and is against the idea that critical thinking is almost impossible for ELT learners. In fact, the infusion of critical thinking into grammar has already been done in ACTs thinking programme (McGregor, 2007). The findings of the current study corroborate the infusion of critical thinking into not only grammar but also vocabulary skills, as has been presented in chapter six.

To summarize, critical thinking has been inherent in ELT through grammar. Moreover, critical thinking may be infused into vocabulary, speaking, writing and reading activities to introduce students to critical thinking elements such as clarification, viewpoint, perspective, reason, interpretation, etc. This has been proven in the Indonesian ELT textbooks examined. Through reading activities conducted in this study, most Indonesian students were able to provide acceptable responses and some were able to provide critical responses. The interview results also show that the students would appreciate activities promoting their critical thinking skills in the classroom through things such as thinking, giving opinions and arguing. This is supported by studies in other Asian countries despite the prevalent pessimistic views on Asian students' characteristics. Some empirical studies have also proven that infusing critical thinking in ELT is possible. These findings suggest

that teaching critical thinking through ELT to Indonesian (Asian or non-Western) students is possible.

6.5 Critical thinking, religious beliefs and cultural background

As mentioned in the methodology, the current study was conducted at four schools: two private schools and two public schools. The private schools the study took place at were an Islamic-based school and a Buddhist-based school. Students at the Buddhist school were mostly Chinese Indonesians, and it was located in the area dominated by the Chinese ethnic group.

In the public schools, the students came from various ethnic groups and religious beliefs. In Indonesia currently there are six religions admitted by the government. They are Islam, Protestantism, Catholicism, Hinduism, Buddhism and Confucianism. These religions are taught at public schools where the teachers also come from a range of different cultural background and religious beliefs.

The results of this study did not show that students of private school A or private school B were better equipped than students of public schools - or vice versa - in terms of their critical thinking skills. As mentioned, critical responses were found in all four schools and students of all schools had similar ability. The findings of the current study are consistent with that of Pikkert and Foster (1996) who found that membership in different ethnic groups did not influence Indonesian students' critical thinking skills.

The teaching of critical thinking skills was successful in different countries with different religious beliefs and cultural background. For example, studies conducted in predominantly Muslim countries such as Turkey (Korkmaz & Karakus, 2009), Iran (Fahim & Nasrollahi-Mouziraji, 2013; Hashemi & Ghanizadeh, 2012), Jordan (Jawarneh et al., 2008), Kuwait (Al-Fadhli & Khalfan, 2009) and Malaysia (Daud & Husin, 2004) have shown that students' critical thinking skills could be improved. Studies in other countries with different religions and cultures such as Japan

(Davidson & Dunham, 1997), South Korea (Shin et al., 2006), Taiwan (Yang, 2008) and South Africa (Lubben, Sadeck, Scholtz, & Braund, 2010) show similar results.

The findings of the current study do not show any difference in critical thinking skills among students from different religious beliefs, cultural backgrounds, or economic status. Hence, it could conceivably be hypothesised that religious belief and cultural background do not impede critical thinking, which suggests that critical thinking skills can be taught to pluralist Indonesian students.

To summarise this chapter, the results of this study show that Indonesian students had difficulties in answering the critical thinking questions; however, their difficulties were not related to thinking processes. Besides this, they supported the idea of giving opinion, commenting, discussing and arguing in the classroom. This was found not only in private but also public schools. This show Indonesian students are not passive learners, and critical thinking activities can be possible if introduced in Indonesian senior secondary schools.

Chapter 7: Conclusions

7.1 Introduction

This chapter presents reflections on the current study and is divided into six sections. Following this introductory section, section two presents a summary of the findings through a review of what is now known that was not known prior to this study. Section three, entitled ‘significance of the findings,’ explains what the current study has contributed to knowledge. The current study is not perfect so the ‘limitations’ section, section four, presents reflections on the limitations of the study. Two recommendations that have come about as a result of the present study are presented. The first recommendation section, under the title of ‘recommendations,’ describes the potential for further work, while the second section comprises recommendations for practice or policy and can be found in ‘implications,’ section six.

7.2 A summary of findings

The present study was designed to investigate two research questions. The first research question intended to investigate whether ELT textbooks used by senior secondary school students in Indonesia facilitated the teaching of critical thinking skills. To find the answer, a content analysis method was applied. The second research question attempted to find Indonesian students’ responses to modified reading materials containing elements of critical thinking. Students answered nine critical thinking questions and their responses were analysed with a rating rubric that was generated to evaluate their written responses. Apart from that, almost half of the participants who answered the modified reading materials were interviewed to find their opinion of the questions and the use of critical thinking activities in the classroom.

The first research question was: *Do Indonesian ELT textbooks facilitate the teaching of critical thinking skills?*

One of the most significant findings to emerge from this study is that textually-explicit questions dominated the Indonesian ELT textbooks examined. Some questions were very easy to answer meaning students were unlikely to think when responding. For example, there was a question asking the name of a writer while the reading passage had the writer's name written right under the title. A question such as this does not need to be included in the textbook and could be replaced with a more challenging question.

Though the textbooks contained open questions in the form of Wh-questions and various types of closed questions such as true/false, listing information, multi-choice question, matching tasks and sentence completion, the study has also found that those questions generally fell into the category of textually-explicit questions. Open questions, which, according to some authors, have enormous potential to include elements of critical thinking, generally did not fall into critical thinking categories in the textbooks chosen.

The second major finding was, aside from textually-explicit questions, which may not promote students' critical thinking, that the textbooks contained a few questions that have potential to facilitate the teaching of critical thinking skills. Those questions, 15.81% of the total, fell into almost all of the analytic categories constructed, such as questions of clarification, questions that probe reasons and evidence, questions about viewpoints or perspective, questions that probe implications, consequences and alternatives, etc. Two other categories, interpretation and analysis, that emerged during data coding were added to the list of critical thinking categories. Questions about analysis were mostly contained in the closed questions.

Another obvious finding to emerge from this study is that the Indonesian ELT textbooks from two different series, especially those for language study programmes, contain literary works such as short stories, folktales, poems, song lyrics and play scripts, and many of the questions following the literary works fell into the analytic categories of critical thinking. Literary questions also fell into the two new categories. The 'interpretation' category, for example, was appropriate for

many literary questions. This may be due to the characteristics of literary works, such as poems, whose meanings are subject to interpretation.

The literature findings, however, mention that students' critical thinking skills need to be facilitated in stages and that teachers play an important role in scaffolding those skills. Connecting this to the findings in textbooks, textually-explicit questions that dominate the textbooks may be used as a stepping-stone to lead students to critical thinking activities. The questions that fell into the analytic categories that accounted for 15.81% of the total questions could be used for this next step. It can be inferred that the Indonesian ELT textbooks are not sufficient to optimally facilitate the teaching of critical thinking skills. As Indonesian teachers still rely heavily on textbooks they must explicitly lead teachers to activities that promote those skills.

The second research question was: *How do Indonesian students respond to modified teaching materials containing the elements of critical thinking?*

This research question was undertaken to investigate how Indonesian senior secondary school students responded to modified reading materials containing elements of critical thinking and to find their opinion and perception of the modified materials and critical thinking activities in the classroom. Three categories were generated to rate the students' written responses: unacceptable, acceptable, and good.

This study has found that responses generally fell into the 'acceptable' category. The responses in this category were understandable and answered the questions but they lacked depth and the students showed little motivation to expand and support their answers. In short, no original thought was found. A few responses fell into the 'good' category in which the responses were supported by students' original thoughts, meaning the students did not only take ideas from the reading passage. The responses in the 'good' category also showed motivation to develop, expand, and support their answer. On the other hand, responses in the 'unacceptable' category could not be understood or, if understood, they did not answer the questions asked. The number of 'unacceptable' responses was above those of the

‘good’ category but below the responses in the ‘acceptable’ category (See chapter 5).

The results of students’ written responses may indicate that Indonesian senior secondary school students have not yet understood how to provide critical responses. There may be several causes for this, such as the teaching-learning processes not encouraging their critical thinking skills. However, a few good responses (3%) that demonstrated elements of critical thinking may indicate that Indonesian students have the potential to be critical. It is therefore likely that ‘acceptable’ or even ‘unacceptable’ responses may be improved if students are taught how to be critical. This is in agreement with students’ oral responses to interviews.

There were five main points asked in the interviews. They investigated if the critical thinking questions in the written test made students think, which questions made them think ‘hard,’ if they found difficulty in answering the questions, what difficulties they found and their opinion/perception on critical thinking activities in the classroom. The results of this investigation show that the majority of participants said that (1) the questions made them think, (2) all kinds of questions made them think hard, (3) they found difficulties in answering the questions, (4) their difficulties were particularly related to their English vocabulary, grammar and lack of confidence, and (5) they liked to have an interactive classroom where they could express their thoughts, give their opinions, have discussions, and even argue points with the teacher. They also said that such activities were important for their study at the university, for their future, to make students active, to practise their argumentation, and to make them courageous. The evidence from the second research question indicates that these students may be ready for the teaching of critical thinking.

This study shows that Indonesian ELT textbooks contain more textually-explicit questions than questions that promote critical thinking. However, these textbooks could be used as a first stage in scaffolding students’ critical thinking skills, and questions falling into the analytic categories - even though they were only 15.81% of the total - could be used as a second and third stage. This seems likely to improve

Indonesian students' critical thinking skills as the study found critical responses in the written test. Though the number of critical responses is small, this shows that Indonesian students have the potential to be critical. Other responses falling into the uncritical categories may be improved if the students are taught how to do so. The findings from the interviews show that Indonesian students may be ready for the teaching of critical thinking skills. Their 'inability' to give critical responses is not caused by their inability to think but caused by their lack of English vocabulary, grammar and confidence.

7.3 Significance of the findings

The present study makes some noteworthy contributions to the current literature. First, the study constructed a new framework that can be used as a method to investigate critical thinking in education and by teachers as a guideline to promote students' critical thinking skills. Second, the study found that literature could be used as a means to teach critical thinking skills.

The literature shows that critical thinking is popular in non-Western education. There are several reasons why non-Western countries seem eager to adopt critical thinking. In short, critical thinking is seen as progress towards modernity and democracy. Some non-Western countries have even issued government regulations and put critical thinking on their educational agendas. Indonesia is one of the countries that have done this. Even though Indonesia and some other non-Western countries have put critical thinking on the educational agenda, there is limited information as to what extent critical thinking has been implemented in education in these countries. It is true that non-Western academics or scholars in non-Western educational contexts have done several studies on critical thinking; however, the studies do not prove the implementation of critical thinking in those countries. Therefore, an alternative method to investigate critical thinking in a non-Western educational context is necessary. The critical thinking framework constructed in this study may answer this need.

Turning now to the second area of significance, one of the obvious findings to emerge from this study is that questions falling into the analytic categories and with potential to encourage students' critical thinking skills were found after literary texts such as short stories, poems, song lyrics and play scripts. Apart from showing that critical thinking can be infused in ELT, this also shows that literature has the potential to promote critical thinking in the ELT context. Although the present study only investigated the content of these textbooks, it confirms previous studies that used literature (novel, short stories, graphic novel, cartoon, etc.) as a source of discussion to promote critical thinking skills. Besides this, the literature has reported various benefits of teaching literary works, including promoting tolerance and empathy, which supportively encourage democracy. The findings contribute additional evidence that supports retaining literature in the ELT curriculum.

7.4 Limitations

Every study is likely to find imperfection due to unavoidable constraints, and the current study is no exception. Three limitations need to be noted regarding the present study. The first limitation is concerned with generalization. The second limitation is related to time, and the last limitation is bound to the research methods.

The first limitation of the current study lies in the fact that there may have been a problem of generalization. As mentioned, Indonesia is a very pluralistic country. The latest information from the Ministry of Health in 2014 states that the population of the country is 252,124,458 people living in 33 provinces (<http://www.depkes.go.id>). Data from the Central Bureau of Statistics of Indonesia based on the latest population census indicates that there are 1,128 ethnic groups in the country (<http://www.jpnn.com>). According to the data from the Ministry of Coordination of People's Welfare, the number of senior secondary schools in the country is 10,239 as of 2008, not including vocational high schools (<http://data.menkokesra.go.id>) with 4,439 senior secondary schools under Islamic education system regulated by the Religious Affairs Ministry (Turmudi, 2008). The current study only investigated students of four schools in Jakarta. The results may not be generalizable to include

the voices of other senior secondary school students across the country. However, as Jakarta is the capital city of Indonesia, and the quality of its education is considered better than that of the national average, the study may be representative enough to reflect the condition of the country.

The second limitation of the current study is that it was limited in time and funding; therefore, it did not investigate the Indonesian teachers' perception of critical thinking and how the teachers used the textbooks in their classrooms, for example. Knowing what the teachers think about critical thinking and how they treat text-based activities may provide more insights into how far critical thinking has or has not been applied in Indonesian education, especially in the context of teaching English as a foreign language. This limitation also caused the study not to investigate Indonesian textbook writers and publishers' perception on critical thinking or their consideration of critical thinking activities in textbooks.

The final limitation concerns the research methods. As mentioned, the methods used in the current study were content analysis, a qualitative analysis of students' written responses, and interview. The content analysis was done using 10 English textbooks with one textbook used for the pilot study. The analysis was not applied to English textbooks used in vocational secondary schools or with other commercial English textbooks available in the market due to the constraint of time. As a few schools do not use textbooks provided freely by the government, knowing the contents of other textbooks may be beneficial to develop a more thorough picture of how critical thinking is manifested in English textbooks for Indonesian senior secondary school levels.

7.5 Recommendations

With regard to the limitations of the current study, considerably more work will need to be undertaken in the following areas:

First, more research is needed to understand how Indonesian senior secondary school teachers perceive critical thinking and how they use textbooks in their

classrooms. This may be targeted not only at English teachers but also at teachers of other subjects. It would be interesting to compare how Indonesian teachers from different subject areas perceive critical thinking. It is also recommended that research on teachers' perceptions and their treatment of the textbooks should be undertaken in big and small cities as well as rural (or deprived) areas where teaching facilities are very limited.

Second, concerning the limitations of the research methods, it would be interesting to investigate not only electronic school books but also other commercial English textbooks which are available on the Indonesian market and used by a few Indonesian senior secondary schools or vocational school. In addition to this, future research might explore other school textbooks such as those used in Indonesian language, history, geography, or civic education in which critical thinking activities may be applied.

More broadly, research in connection with critical thinking and strategies to promote critical thinking skills should be carried out in the Indonesian educational context. This research could also be conducted at the level of higher education, as critical thinking plays a bigger role in these HE institutions. To date, there has been very little research on promoting students' critical thinking skills in Indonesian educational contexts and this study is the first investigating the representation of critical thinking in Indonesian ELT textbooks.

Finally, as mentioned, there has been disagreement on defining critical thinking. More work on this issue may need to be done, especially in the Indonesian context. Additional studies proposing a definition and characterisation of critical thinking may be beneficial. Apart from contesting ideas through practicing critical thinking, a future study may propose the kind of critical thinking required in Indonesia.

7.6 Implications

Studies have shown that teaching critical thinking to non-Western students is very possible and that critical thinking can be infused in ELT. In the context of ELT,

critical thinking can bring at least two positive impacts. Aside from promoting English language proficiency, it can also improve students' critical thinking and communication skills. Both of which are necessary in daily life and professional careers.

Critical thinking exists, potentially, within all school subjects and may give influence beyond school subjects. Critical thinking can also be found within the subject of ELT, for example, in grammar and vocabulary activities, as has been shown in the current study. However, critical thinking should not stop within the subject; it needs to go beyond the subject to affect individuals and society. In an ELT class, for instance, critical thinking could be introduced in the form of dialogical critical thinking in speaking skills, critical thinking questions in reading skills, or critical responses in writing skills. This may provide an opportunity to make students see with a much wider perspective and to make them aware of problems in society. Thus, this may contribute to a better quality of life and promote a more democratic society in the future.

The findings of the current study suggest several courses of action for government, textbook writers and publishers, teachers and teaching practices, and researchers. First of all, the Indonesian government could be more serious in promoting critical thinking in education as it has been officially stated in their standards. For example, there could be training on what critical thinking is, what it means in the Indonesian context, what is expected from including critical thinking in education, how to create critical thinking activities based on the textbooks, and, more importantly, critical thinking activities could be put into textbooks as teachers rely on them in their teaching activities. Finally, the book commission under the Department of National Education could also be involved in the promotion of critical thinking by putting critical thinking as a criterion for book selection.

The second implication is for textbook writers and publishers. They could consider including more critical thinking activities in their textbooks. By studying the elements of critical thinking as presented in this study, they may be able to create activities that promote critical thinking skills. Besides this, they also need to understand and be more aware of the importance of critical thinking for Indonesian

students and the future of Indonesia. When necessary, they can provide a teacher's edition as a guide for teachers on how to conduct classroom activities containing the elements of critical thinking or to create activities promoting students' critical thinking skills based on texts available in the textbooks. Finally, one important issue concerning this is that a further study with more focus on textbook publishers' decision making processes would be needed.

The third implication is for Indonesian teachers and teaching practices in the country. The main problem faced by the Indonesian teachers (or the majority of them) is that they may not know how to create critical thinking activities, as they are also the products of 'uncritical' education. This may be because this concept only exists on the written document without being seriously disseminated by the educational authority to all parties involved in educational settings, specifically teachers. Another cause may be the nature of critical thinking itself, which is still debatable, hence, the confusion among many people, especially those living in non-Western countries where the critical thinking concept is not yet prevalent. These factors are likely to make Indonesian schoolteachers know critical thinking only by name while they may not know what it is exactly or how to apply it in the classroom. Therefore, they need training on critical thinking, as mentioned above.

This study is also expected to be able to contribute to teaching aspects in Indonesia in order to improve the quality of human resources as a whole. Firstly, as the study investigates activities that may promote critical thinking skills in the context of English language teaching and learning, the activities may be applied by English teachers all over Indonesia regardless of the textbook they use and the level of education they teach. With some modification, teachers teaching regional/local languages, the national language, and other foreign languages such as Arabic, Japanese, Mandarin, German and French may also apply these activities. Secondly, the critical thinking framework constructed in this study may become an inspiration for non-language teachers such as those who teach history, biology, geography, religion, civics and other subjects to apply the principles of critical thinking in their respective teaching activities.

The final implication is that, as this study provides understanding about critical thinking skills, critical thinking approaches and strategies as well as critical thinking activities that could be carried out in the classroom, the principles of teaching critical thinking skills can and will be disseminated in seminars in Indonesia and schoolteachers, specifically English teachers, will be trained on what critical thinking is and how they can apply it in their teaching activities using the textbooks with which they are familiar. Providing training to people outside of the institution is actually one of prerequisites for a lecturer to reach his/her professorship with a budget provided by his/her institution or the Ministry of National Education. This is identified as community service and has to be conducted at least once a year by a lecturer who wants to move to a higher level of scholarship, based on the regulation in Indonesia. In addition to improving school teachers' professional development, this can, hopefully, move the 'critical thinking' phrase from the Regulation of the Republic of Indonesia to real life situations where the concept will no longer be alien to educational practitioners in the country.

Appendix 1: A modified reading passage

Rainforests as Economic Reserves

We discovered previously that rainforests are essential to our life on earth. They also provide a rich variety of economic resources that are used all over the world. This presents countries with a serious dilemma. Rainforests are used for a number of economic purposes, ranging from agricultural to urban and industrial use. The dilemma facing many rainforest-rich countries, including Australia, is that, as these economic demands grow, the planet's rainforests are placed under increasing threat of destruction. The economic resources provided by the world's rainforests are enormous. Here are just some of the more important ones.

Foods

Nearly 50 per cent of the world's food supplies originate in rainforest areas. Items that we commonly buy from the supermarket such as bananas, pineapples, mangoes, peanuts, macadamia nuts and cashews, all originated in rainforests. Many popular foods like rice, corn and maize also come from the rainforest, as do tea, coffee, cocoa and sugar.

Recreation

Rainforests are becoming increasingly popular places for people to visit because they are seen as areas of wilderness and natural beauty. People take part in activities such as fishing, bush-walking, rock climbing and four-wheel driving. The overuse of rainforest for tourist activities has led governments to pass laws restricting activities in these forests. Queensland is one area where the government has passed laws regulating rainforest activities.

Medicines and drugs

Many medicines and drugs sold by the local pharmacist come from plants that grow in rainforests. For example, medicines used for travel sickness, headaches, stomach upsets, skin diseases and leukaemia all come from the rainforests. In fact, nearly 40 per cent of all medicines sold in chemists, originate from rainforests.

Industrial and building products

Rainforests provide many products used by the community for urban development. These include timber converted into building materials for house framing, furniture, fencing, panel products and flooring. Rainforests also supply wood chips used in making cardboard, toilet tissue and the pulp used for some papers.

Many industrial products also originate from the rainforests. Spices, rubber, oils, waxes, dyes and gums are just some examples. Even everyday products such as toothpaste, cosmetics, tyres, paints and deodorants are produced from plants growing in rainforest areas.

Sustainable development

Scientists believe that over 200,000 square kilometres of rainforest are being destroyed each year for economic purposes. Most people would acknowledge the economic importance of the world's rainforests. However, there needs to be a balance between the way we are currently using our rainforests and the future availability of these resources. This is now commonly being referred to as ecologically sustainable development.

For example, conservationists, governments and industry groups believe that timber should be harvested from forests in a sustainable way. This should be done without permanently damaging the home of other plants and animals, the soil or rivers and creeks. This is a very complex task. It involves ensuring trees that are removed from the forest which are replaced by seedlings that will form part of the new forest.

To conclude, since the rainforest are very crucial to support many aspects of life, it is our duty to preserve them.

Answer the following questions.

Part A *(note: these are the questions from the original book)*

1. What is the dilemma faced by many rainforest-rich countries?
2. Are the economic resources provided by the world's rainforests extremely large in number?
3. What percentage of the world's food supplies originate in rainforest areas?
4. Why are rainforest becoming increasingly popular places for people to visit?
5. What activities do people do in rainforests?

6. What caused governments to pass laws restricting activities in rainforests?
7. What percentage of all medicines sold in pharmacies originate from the rainforest?
8. What do rainforests produce for urban development?
9. What are wood chips used for?
10. What is the thesis statement of the text above?

Part B (*note: these are additional questions by incorporating the elements of critical thinking taken from the analytic categories*)

1. What does the writer mean by “the planet’s rainforests are placed under increasing threat of destruction” (paragraph 1 lines 5-6)?
2. What do you assume from paragraph 2 (*Foods*)?
3. What evidence does the writer use to say that “rainforests provide many products used by the community for urban development”?
4. What is your opinion about this “sustainable development”?
5. What are the consequences if there is no more rainforest?
6. What does question number 5 ask you to do?
7. What do you predict if sustainable development is not applied?
8. Do you agree with the writer? Why / Why not?
9. What can you conclude from this passage?

Appendix 2: Questions for the semi-structured interview

1. Do you think the questions in part B made you think?
2. (If yes) Which questions made you think hard?
3. Did you find any difficulty in answering the questions?
4. (If yes) What difficulties did you find?
5. What is your opinion if in any lesson you are asked to think?

Appendix 3: Textually-explicit questions found in the open and closed questions

1. True/False identification (TF)

(1)

Textbook: Developing English competencies for natural and social science programmes – grade XI chapter 3 activity 7 (p. 67)

Text: (Title: The Importance of Rainforest) – Rainforests are one of the most complicated environments on Earth. They are recognised worldwide as containing the richest source of plants and animals and are believed to contain nearly three-quarters of all the varieties of life on Earth. This is remarkable because rainforests cover only about six per cent of the Earth’s land surface.

Question: Rainforests are unimportant to our life on Earth. (True/False)

(2)

Textbook: Developing English competencies for language programme – grade XI chapter 2 activity 4 (p. 37)

Text: Even so, the cock has not yet given up hope of getting his horns returned. He ordered his descendants always to call out at the break of day: “Give me back my horns!” He still hopes that the dragon may hear him.

Question: The cock didn’t expect the dragon to return his horns any more. (True/False)

(3)

Textbook: Interlanguage for language study programme – grade XI unit 12 task 11 (p. 222)

Text: A guy walks into a post office one day to see a middle-aged, balding man standing at the counter methodically placing “Love” stamps on bright pink envelopes with hearts all over them. He then takes out a perfume bottle and starts spraying scent all over them.

Question: He used perfume to spray the envelopes. (True/False)

(4)

Textbook: Interlanguage for science and social study programmes – grade XI unit 1 task 18 (p.13)

Text: On the evening of 31st of May, the ceremony to cast the greediness spirit away (Muai Antu Rua) is held. Then the offering ceremony (Miring) is conducted. Thanking God for the good harvest, guidance, blessing and long life is done through sacrificing a cockerel.

Question: Sacrifice is done through slaughtering a turkey. (True/False)

(5)

Textbook: Interlanguage for science and social study programme – grade XI unit 10 task 11 (p. 182)

Text: “How did you loose your leg?” The pirate responded, “I lost my leg in a battle off the coast of Jamaica!”

Question: The pirate lost his leg in Jamaica. (True/False)

2. Listing information (LI)

(1)

Textbook: Developing English competencies for natural and social science programmes – grade XI chapter 1 activity 6 (p. 15)

Text: (The titled *What Are Thunder and Lightning?* tells the readers about lighting and thunder and how they occur)

Question: Write the information about lightning that you find in Activity 5. (Students were asked to list information related to length, temperature, place of occurrence and how it happens)

(2)

Textbook: Developing English competencies for language programme – grade XII chapter 4 activity 7 (p. 143)

Text: Omaha Chapter of the NFB – Writing Contest for Short Stories; Awards: \$100, \$50, \$25, \$10 honorable mentions, Entry fee: \$5, Deadline: September 15, 2007. The competition is a fund raiser for the Omaha Chapter of the National Federation of the Blind. Enter the contest and win some cash while supporting a worthy cause at the same time. Info: <http://www.midwestfictionwriters.com/> or www.midwestfictionwriters.com/node/2.

Question: Read the announcement. Then fill in the table. (The table contained event, prizes, fee, deadline, purpose of the event and websites of the organizer)

(3)

Textbook: Interlanguage for science and social study programmes – grade XI unit 5 task 14 (p. 85)

Text: (The text titled “Damon and Phintias” tells a story about 2 best friends who lived in Syracuse, Sicily in the 4th century BC. They were philosophers of Pythagorean School. The text mentioned another character and setting such as place, time, problem, etc.)

Question: (Write down) characters in the story and the story’s setting – time, place, how the story began, problems and how the story ended.

(4)

Textbook: Interlanguage - grade X unit 8 task 10 (p. 137-138)

Text: (There were three texts about a dog, cat and horse. The text about dog titled ‘Beautiful Golden Retriever,’ and the complete text was “I have a beautiful 2 year old Golden Retriever with silky light brown hair. I have named her Goldie. She is about 0.5 m tall, and weighs 20 kg. She is a very good pet. She is great with kids and other dogs. If you are interested in my dog, please call Aji at (021) 532 444, or email ajipurnomo@yahoo.com.”

Question: Describe the dog in the first ad (name, type, age, colour, height, weight and other characteristics)

3. Multi-choice question (MC)

(1)

Textbook: Developing English competencies for natural and social science programmes – grade XII chapter 1 activity 9 (p.17)

Text: There was once upon a time a poor peasant called Crabb, who drove with two oxen and a load of wood to the town, and sold it to a doctor for two talers. When the money was being counted out to him, it so happened that the doctor was sitting at table, and when the peasant saw how well he ate and drank, his heart desired what he saw, and would willingly have been a doctor too.

Question: Read the text once more and then choose the best answer to the questions.

Question number 1 read: What did the peasant called Crabb sell to the doctor?

(a) Some food; (b) Some wood; (c) Some wine

(2)

Textbook: Interlanguage - grade X unit 3 task 11 (p. 42-43)

Text: You are invited to join us for Ruben's 16th birthday party! Saturday, 2 August 2008 - 7 p.m. – closing time; Ruben's house, Ahmad Yani street No. 27; Food, drink, games, and entertainment will be provided; Be there to celebrate this momentous occasion! RSVP to Ruben at (024) 424 444

Questions: Tick the correct statement.

1. (a) Ruben is turning 16 on 2 August 2008. (b) Ruben's birthday is on 16 August 2008. (c) Ruben is invited to join a birthday party.
2. (a) Ruben's birthday party starts at 16 o'clock. (b) Ruben's birthday party starts at 2 o'clock. (c) Ruben's birthday party starts at 7 o'clock.

(3)

Textbook: Interlanguage - grade X unit 5 task 13 (p. 79-80)

Text: ANNOUNCEMENT: The school drama club is going to organize the "Sangkuriang" casts audition. For those who are interested to join the audition, please come to our office on Monday, 4 August, at 2 p.m. to register. The followings are the requirements: (1) your latest photograph of postcard size (2) the registration form (get it in the office). The audition will be held on Sunday, 10 August, at 9 a.m. The list of the selected candidates will be announced in a week. We do appreciate your participation. Thank you. The Committee

Questions: Tick the correct statement.

1. (a) The audition will be held on 17 August. (b) The audition will be held on 10 August. (c) The audition will be held on 4 August.
2. (a) The audition will be held at 2 p.m. (b) The audition will be held at 9 p.m. (c) The audition will be held at 9 a.m.

4. Sentence completion (SC)

(1)

Textbook: Interlanguage – grade X unit 8 task 11 (p. 139-140)

Text: *Jessica Alba and Her Pets*: Jessica Alba looks very cheerful with her two pugs. She named them Sid and Nancy. The two dogs look similar. Both have white fur and brown markings. They also wear the same red ribbon around their necks; *Hillary Duff and Her Pet*: Hillary takes a few moments to get down with her little dog. She named it Lola. Lola is a cute Chihuahua. Its colour is light brown. It looks pretty in pink.

Question: (1) Sid and Nancy are ...'s pets. They have ... fur and ... markings; (2) Hillary Duff's chihuahua is named ... Its colour is...

5. Open questions (OQ)

(1)

Textbook: Interlanguage for language study programme – Grade XI unit 2 task 10 (p. 29)

Text: Venice is a city in northern Italy. It is the capital of region Veneto. Together with Padua, the city is included in the Padua-Venice Metropolitan Area.

Question: What is Venice?

(2)

Textbook: Interlanguage for science and social study programmes – Grade XII unit 2 task 13 (p. 37)

Text: Drugs are chemicals that change the way a person's body works. You have probably heard that drugs are bad for you, but what does that mean and why are they bad?

Question: What are drugs?

(3)

Textbook: Interlanguage for language study programme – Grade XII unit 3 task 1 (p. 45)

Text: (There were the pictures of 5 flags from different countries and greeting expressions used in the countries)

Question: How many languages do you speak?

(4)

Textbook: Developing English Competencies for natural and social science programmes – Grade XI chapter 1 activity 4 (p. 14)

Text: Kangaroos are marsupials. This means that the female kangaroo has an external pouch on the front of her body. A baby kangaroo is very tiny when it is born, and it crawls at once into this pouch where it spends its first five months of life.

Question: Where do you find the pouch of the female kangaroo?

(5)

Textbook: Developing English Competencies for natural and social science programmes – Grade XII chapter 1 activity 8 (p. 5)

Text: A beggar found a purse that someone had dropped in the market place. Opening it, he discovered that it contained 100 pieces of gold.

Question: Where did the beggar find the purse?

(6)

Textbook: Developing English Competencies for language programme – Grade XII

Text: Semi-finalists will be chosen by a regional team of published writers. The final manuscript will be chosen by Susan Swartwout, publisher of Southeast Missouri State University Press. The winner receives an award of \$500 and publication in *Big Muddy: A Journal of the Mississippi River Valley*. Winner will be announced October 1, 2008.

Question: Who will choose the semi-finalists? What are the prizes for the winner?

Appendix 4: Open questions falling into the analytic categories

1. Questions of clarification

Word clarification

(1)

Textbook: Interlanguage for language study programme – grade XI unit 15 task 9 (p. 273)

Text: (The text was a poem titled “Education” by Norena M. Jones)

“ ...

Education will help you excel

Not lead you to a county jail 10

You won’t find yourself doing ten

In any county pen

Or being charged with first degree murder

In a court of order

And as your family wail 15

You’re getting life without bail

...”

Question: (1) What does the word ‘wail’ mean? (2) What does the word ‘bail’ mean?

(2)

Textbook: Developing English Competencies for natural and social science programmes - grade XI chapter 6 activity 11 (p. 129).

Text: On a recent vacation at a resort with my in-laws, we planned to spend an afternoon at the pool with our kids. We wanted to bring our own drinks, but were unsure of the hotel's policy. My brother-in-law called the front desk, and assuming everyone was familiar with the brand of ice chest he had, asked if it was all right if he brought a Playmate to the pool. After a pause the clerk asked, "Does she have her own towel?"

Question: What was "Playmate" meant by the brother-in-law?

(3)

Textbook: Developing English Competencies for language programme - grade XI chapter 7 activity 4 (p. 145)

Text: Because my husband, John, tends to snore, I rarely get more than a couple of hours sleep each night. When he awakens refreshed in the morning, he's always astonished to find that he has been the cause of another sleepless night for me.

Question: What is the meaning of *sleepless*?

Poetic expression clarification

(1)

Textbook: Interlanguage for language study programme – grade XI unit 15 task 11 (p. 275)

Text: (The text was a poem titled “A Child Is the Greatest Gift” by Domenico Scarlatti – paragraph 2)

“Some days deliver happiness,
Far more than we can touch.
We need the help of all our friends
To comprehend how much.”

Question: What does the phrase ‘some days deliver happiness’ mean?

(2)

Textbook: Interlanguage for language study programme – grade XII unit 13 task 6 (p. 263)

Text: (The text was a poem titled “Actors Wear a Special Mask” by Robert Devisee)

“Actors wear a special mask:
One that's most revealing.
When they pretend they're someone else
They hang themselves to dry.

The tears and screams they've made their task
Leave nothing for concealing.
Each wound must bleed again, or else
The audience won't cry.”

Question: (1) What does the first stanza mean? (2) What does the second stanza mean?

(3)

Textbook: Interlanguage for language study programme - grade XII unit 12 task 13 (p. 247)

Text: (The text was a song lyric titled "Everything I Do" by Brian Adam)

Look into my eyes - you will see

What you mean to me

Search your heart - search your soul

And when you find me there you'll search no more

Don't tell me it's not worth tryin' for

You can't tell me it's not worth dyin' for

You know it's true

Everything I do - I do it for you

Look into my heart - you will find

There's nothin' there to hide

Take me as I am - take my life

I would give it all I would sacrifice

Don't tell me it's not worth fightin' for

I can't help it there's nothin' I want more

Ya know it's true

Everything I do - I do it for you

Questions: (1) What does the singer mean by asking his girl to look into his eyes?

(2) What does "take me as I am" mean?

2. Questions that probe reasons and evidence

Supporting/arguing the answer

(1)

Textbook: Interlanguage for language study programme - grade XI unit 13 task 8 (p. 243)

Text: (The text was a drama script)

Question: Does the drama end sadly or happily? Support your answer.

(2)

Textbook: Interlanguage for language study programme - grade XI unit 13 task 11 (p. 246)

Text: (The text was a short story adopted from the internet)

Question: Was the arrival on time? If not, why?

(3)

Textbook: Interlanguage for science and social study programme - grade XII unit 7 task 1 (p. 145)

Text: (The text was the pictures of six books)

Question: Which book attracts your attention most? Why?

Stating the argument/reason

(1)

Textbook: Interlanguage for science and social study programme – grade XII unit 5 task 16 (p. 104)

Text: (The text was a reading passage titled “A Ban on Cell Phone Use at the Wheel: Motorists to Face Jail Terms for Using Cell Phones”)

Question: Should the ban cover motorists using hands-free phones? State your argument.

3. Questions about viewpoints or perspectives

Direct-viewpoint questions

(1)

Textbook: Interlanguage for language study programme – grade XII unit 4 task 19 (p. 84)

Text: (The texts were pictures of students who worked)

Question: In your opinion, what made them (students) decide to work while studying?

Viewpoint on Yes/No questions

(1)

Textbook: Interlanguage for science and social study programmes – grade XII unit 8 task 2 (p. 168)

Text: (The text was about movie review)

Question: Does reading review help you decide what movie you are going to watch? State your opinion

(2)

Textbook: Interlanguage for language study programme – grade XII unit 9 task 1 (p. 175)

Text: (The text was about books)

Question: Have you read one of the books? If so, what do you think of the book?

Viewpoint on WH-questions

(1)

Textbook: Interlanguage for science and social study programme – grade XI unit 4 task 1 (p. 61)

Text: (The text was a picture about drugs)

Question: What should the government do about them (drugs)?

(2)

Textbook: Interlanguage for science and social study programme – grade XI unit 4 task 1 (p. 61)

Text: (The text was a picture about drugs)

Question: What do you think we should do to drug dealers?

(3)

Textbook: Interlanguage for science and social study programmes – grade XII unit 3 task 1 (p. 50)

Text: (The text was the pictures of climate change)

Question: What do you think causes such an environment change?

(4)

Textbook: Interlanguage for science and social study programmes – grade XI unit 7 task 1 (p. 123)

Text: (The text was the pictures of farming system)

Question: What is your view on the organic farming?

(5)

Textbook: Developing English competencies for language programme – grade XII chapter 5 activity 2 (p. 97)

Text: (The text was a dialogue)

Question: What is your view about cloning?

Viewpoint on literary work-related questions

(1)

Textbook: Interlanguage for language study programme – grade XI unit 5 task 1 (p. 77)

Text: (The text was three pictures of characters in the famous stories)

Question: What do you learn from the story?

(2)

Textbook: Interlanguage for science and social study programme – grade XII unit 6 task 19 (p. 136)

Text: (The text was a story titled “Peter and the Mountainy Men”)

Question: What do you learn from the (fairy) tale?

(3)

Textbook: Interlanguage for language study programme – grade XII unit 11 task 3 (p. 220)

Text: (The text was a drama script titled “All for a Pansa”)

Question: What message does the drama contain?

(4)

Textbook: Developing English competencies for language programme – grade XI chapter 9 activity 9 (p. 192)

Text: (The text was a poem titled “Love and Friendship” by Emily Bronte)

Question: What is your view on love and friendship?

(5)

Textbook: Developing English competencies for natural and social science programmes – grade XI chapter 2 activity 5 (p. 41)

Text: (The text was a story titled “Why does the Cock Eat Millipede?”)

Question: What are the moral values you can find from the story? Share them with your partner.

(6)

Textbook: Developing English competencies for language programme – grade XI chapter 9 activity 3 (p. 184)

Text: (The text was a song lyric)

Question: What are the messages from the song?

4. Questions about conclusion

(1)

Textbook: Developing English competencies for language programme – grade XI chapter 9 activity 9 (p. 192)

Text: (The text was a poem titled “Love and Friendship” by Emily Bronte)

“Love is like the wild rose–briar,

Friendship like the holly–tree—

The holly is dark when the rose–briar blooms

But which will bloom most constantly?

The wild rose–briar is sweet in spring,

Its summer blossoms scent the air;

Yet wait till winter comes again

And who will call the wild–briar fair?

Then scorn the silly rose–wreath now

And deck thee* with the holly's sheen,

That when December blights thy* brow

He still may leave thy garland green.”

Question: The conclusion of the poem is in the third stanza. Can you draw the conclusion?

(2)

Textbook: Developing English competencies for natural and social science programmes – grade XII chapter 1 activity 8 (p. 5) and Developing English competencies for language programme – grade XII chapter 1 activity 8 (p. 5)

Text: (The text was a story about a beggar who found a purse)

Question: What is your conclusion of the story?

(3)

Textbook: Developing English competencies for language programme – grade XII
chapter 3 activity 5 (p. 61)

Text: (The text was a reading passage titled “Abortion: A Controversial Issue”)

Question: (The task asked students to write a conclusion)

Appendix 5: Closed questions falling into the analytic categories

Questions of clarification

(1)

Textbook: Interlanguage for science and social study programmes – grade XI unit 9 task 18 (p. 168-169) and Interlanguage for language study programme – Grade XI unit 11 task 18 (p. 208-209)

Text: (The text was a reading passage titled ‘Fluffy Bunny Rabbit’)

Question: (Number 9)

“We just found him dead in his cage one day. But the strange thing is that the day after we buried him, we went out to dinner and someone must have dug him up, gave him a bath and put him back into the cage”. What does the statement mean?

- a. The dog was dead before the dog dug it out.
- b. Someone consciously killed the rabbit and hid it.
- c. Someone found a dead rabbit and then buried it.
- d. Chris put it back to its cage because his dog killed it.
- e. His neighbour did not know that the rabbit was dead in its cage.

(2)

Textbook: Interlanguage for science and social study programmes – grade XI unit 10 task 27 (p. 190-191) and Interlanguage for language study programme – Grade XI unit 12 task 27 (p. 230-231)

Text: (The text was a passage titled ‘A Small Experiment’)

Question: (Number 8)

“Damn it Earl, for the fifth time, CHICKEN!” What does the statement mean?

- a. She had cooked chicken five times.
- b. She did not hear him.
- c. She thought that chicken was great.
- d. She had eaten the chicken five times.

Appendix 6: Categories emerging outside the predetermined analytic categories

1. Questions about analysis in the open questions

(1)

Textbook: Developing English competencies for language programme – grade XI chapter 4 activity 3 (p. 81)

Text: (The text was an MC script)

Question: What does the introduction consist of?

(2)

Textbook: Developing English competencies for language programme – grade XI chapter 9 activity 5 (p. 195)

Text: (The text was a song lyric titled “Perfect”)

Question: (1) Can you describe dad’s character? (2) What characteristics does the son have?

(3)

Textbook: Developing English competencies for language programme – grade XI chapter 10 activity 4 (p. 215)

Text: (The text was a short story titled “The Necklace” by Guy de Maupassant)

Question: Can you describe in detail the characteristics of the following characters?
(a) Madame Loisel (b) Monsieur Loisel (c) Madame Forestier

2. Questions about analysis in the closed questions

Finding antecedents

(1)

Textbook: Developing English competencies for natural and social science programmes – grade XI chapter 6 activity 7 (p. 154)

Text: (The text was a reading passage titled ‘Parents Need to Analyse International Schools’) – MT questions

Question: Find what the following words refer to:

1. They (paragraph 1, line 3)
2. It (paragraph 4)
3. We (paragraph 5)
4. This (paragraph 5)
5. Them (paragraph 6)

Finding synonyms

(1)

Textbook: Developing English competencies for natural and social science programmes – grade XI chapter 6 activity 10 (p. 157)

Text: (The text was a reading passage titled ‘Parents Should Be Wary of Expensive schooling’) – MT questions

Question: Find the words in the text of which meanings are written in the following box.

1. violent excitement (paragraph 1)
2. intense; strong (paragraph 1)
3. not very good (paragraph 1)
4. satisfied (paragraph 2)
5. too much (paragraph 3)
6. have a second job, in addition to one’s main job (paragraph 10)

(2)

Textbook: Developing English competencies for language programme – grade XI chapter 9 activity 4 (p. 189)

Text: (The text was a song lyric) – MT questions

Question: Find the words in the song lyrics that have the following literal meanings.

1. Goodbye
2. Evidence that proves that somebody was somewhere else when a crime is committed

3. Feeling of being sorry at the loss of something or because of something one has done
4. Kindness or forgiveness shown to somebody one has the power to punish
5. Remove
6. Blue-grey rock that splits easily into thin, flat layers
7. Suffering in body or mind
8. Stop being angry or bitter towards (somebody) for (something)

(3)

Textbook: Developing English competencies for language programme – grade XI chapter 9 activity 8 (p. 192)

Text: (The text was a poem titled ‘Love and Friendship’)

Question: Find the words in the poem which have literal definitions as follows. Do it in pairs.

1. Circle of flowers or leaves as a decoration
2. Gleaming brightness
3. Circle of flowers and leaves, e.g. put on a grave
4. Smell, especially a pleasant one
5. Thorny bush
6. Withers
7. Decorate
8. Feel or show that a person or thing deserves no respect

(4)

Textbook: Developing English competencies for natural and social science programmes – grade XII chapter 3 activity 10 (p. 71)

Text: (The text was a reading passage titled ‘Birth Control’)

Question: Find the synonyms of these words in the text.

1. restriction
2. disagree

3. ethical
4. delay
5. interest
6. gestation
7. incite
8. disagreement
9. decree
10. basis
11. synthetic
12. the act of having sex
13. matrimonial
14. propagation

Text analysis

(1)

Textbook: Developing English competencies for natural and social science programmes – grade XI chapter 3 activity 7 (p. 67)

Text: (There were 2 passages about rainforests) – TF question

Question: Many rainforest-rich countries are facing a situation in which it is very difficult to preserve their rainforests. (This question was textually-implicit in which students needed to interpret and analyse the content)

(2)

Textbook: Developing English competencies for natural and social science – grade XII chapter 1 activity 5 (p. 14) and Developing English competencies for language programme – grade XII chapter 1 activity 5 (p. 14)

Text: (The text was an Indonesian folktale)

Question: Find the paragraphs of the text in Activity 4 that tell you the following information.

1. The setting and scene of the story
2. Dayang Sumbi's beauty

3. Tangkuban Perahu
4. The king's characters
5. Why the she-pig became pregnant
6. Why Dayang Sumbi was angry
7. Dayang Sumbi knew that Sangkuriang was her son.
8. What Sangkuriang did to fulfil Dayang Sumbi's wish

Appendix 7: Students' written responses to modified reading questions (The responses were not edited)

1. Question of clarification: What does the writer mean by “the planet’s rainforests are placed under increasing threat of destruction” (paragraph 1 lines 5-6)?

Public school A: Acceptable responses

What the writer means by “the planet’s rainforests are placed under increasing threat of destruction” is the rainforest are heading into extinction.

I think the writer mean is now rainforest becoming worst caused by human. They taking of natural resources that rainforest had and didn't take of it.

Public school B: Acceptable responses

It mean all rainforest in planet are being destroyed each year for economic purpose.

Because the rainforests are essential to our life on earth and provide economic resource that are used all over the world. But we, humans destroyed it for economic purposes.

Private school A: Acceptable responses

It means the rainforest in this world is in crisis of destruction.

It means the rainforest is destroyed day by day, someday the rainforest in the earth will be gone.

It means rainforest little by little is extinct, so it is increasing threat of destruction.

Rainforest will be destruction because rainforest are used for a number of economic purposes, ranging from agricultural to urban and industrial use without take care.

It mean the planet’s rainforest are getting decrease, and if the increasing threat of destruction don't get any repair, the rainforest will be gone, and the temperature will increase extremely.

2. Question that probes assumption: What do you assume from paragraph 2?

Public school A: Acceptable responses

I think our food is depend of rainforest. So, we have to keep rainforest and preserve them.

Rainforest supplies many kind of food for world, example bananas, pineapples, mangoes, peanuts, and many more.

From rainforest we can fulfil our food supplies, because rainforests produce many or may be all of the food that we consumed such as fruits, vegetables, rice, tea, sugar, coffee, and so on.

Public school B: Acceptable responses

Many food that we consume from rainforest. Nearly 50 per cent of the world's food supplies originate in rainforest area. If the rainforest is damaged, surely creature on earth is dead.

I assume that most foods that people consume are from rainforest.

3. Question that probes reason and evidence: What evidence does the writer use to say that “rainforests provide many products used by the community for urban development”?

Public school A: Acceptable responses

The evidence that the writer uses are timber, which are converted into building materials and also wood chips, which used in making cardboard and toilet tissue. Spices, rubber, oils, waxes, dyes, and gums are just another example.

Rainforest provide basic needs for urban development such as timber (for building) and some materials for house framing, furniture, fencing, panel, etc. That are really needed for the urban development process.

Private school A: Acceptable responses

For example, timber converted into building material is from rainforest. The material to make a floor also from the rainforest.

Let's see, every day we eat fruits, work on the table, sit on the chairs where those stuff came from? It's from the rainforest. Rainforest is supplying our daily necessary's component.

Private school B: Acceptable responses

The writer uses “rainforests provide many product used by community for the community for urban development” in paragraph 5. The writer was saying about the industrial and building developments.

A rainforest used for house framing, furniture, fencing, panel products and flooring. Rainforest also supply wood chips used in making cardboard, toilet tissue.

4. Question about viewpoint/perspective: What is your opinion about ‘sustainable development’?

Public school A: Acceptable responses

Sustainable development is a development which is environmentally and care the environment.

I think sustainable development is important and should be done for balancing our needs.

In my opinion the sustainable development is something which can support us or something to get the better or the best life by keep our earth.

Public school B: Acceptable responses

Sustainable development is great for economic purpose. But, most people don’t know the effect from destroy rainforest.

In my opinion, sustainable development is a task of government to keep rainforest. But we also have to take part to keep it.

It is something that we need to keep our environment. And balance what we take and what we give to our environment.

Private school A: Unacceptable responses

We have to make a realm.

The scientist always find many developments that used for medicine.

My opinion about sustainable development is make natural balance is not maintained.

Private school B: Acceptable responses

My opinion about sustainable development is to improve environment.

We should get rainforest product without damaging rainforest.

They should harvest those timber without damaging the home of other animals and plants even though that's a very complex task.

5. Question that probe implications, consequence and alternative

Public school A: Acceptable responses

The consequences if there is no more rainforest is that we'll lost some economic resources that rainforests provide.

If there is no rainforest, there's no food like mangoes, peanut, or bananas, no medicine, and no materials used to build a house framing, furniture or fencing.

Public school B: Acceptable responses

The consequences are global warming. No more trees that could reserve the carbon dioxide into O₂. Our earth would be hotter and hotter.

The consequences are like global warming because the trees disappear, the extinct of many creature, the mass or global destruction of world's economic and many more.

Private school A: Acceptable responses

The world will be a hot world. The effect of green house will be worse than this time.

The consequence if there is no more rainforest make out of water for next generation and the world will be the end.

Private school B: Acceptable responses

Consequences if there is no more rainforest will reduce food supply, lack of recreational facilities, medical supplies diminished and also reduce industrial materials.

If there is no rainforest we would suffer drought.

6. Question about the question: What does question number 5 ask you to do?

Public school A: Acceptable responses

It ask me to tell the consequences if we have no rainforest left.

The question number 5 ask me to keep and take care of rainforest.

Public school B: Acceptable responses

To tell what is the consequences if there is no more rainforest.

Giving my opinion the consequences if there is no more rainforests.

Private school A and B: Acceptable responses

To list down the problem if we don't have rainforest anymore.

To give my own opinion of what the consequences if there is no more rainforest.

To tell the problems if we do not have rainforests.

7. Question about prediction: What do you predict if sustainable development is not applied?

Public school A: Acceptable responses

It will damaging the home for animal. It will reduce the planet's rainforest.

What I predict if sustainable development is not applied is the extinction of rainforest.

The economic growth will increase very-short term only. In the future, if we have no sustainable development, we have nothing to increase.

Public school B: Acceptable responses

Rainforest will destroyed if sustainable development is not applied.

The rainforest will gradually become smaller and before we know it Amazon probably the last rainforest in the world, and there will be conflict because all country want to own the last rainforest.

I predict that economics will be decreasing even economical crisis will happen, and the environment & climate will become more unstable.

Private school A: Acceptable responses

The rainforest will gone and we will die together slowly.

The environment will be mess and we will out of water and damaging the home of other plants and animals.

Private school B: Acceptable responses

What I predict is the damage of animals and plants, the soil and water.

Rainforest will be destroyed, economic will be destructed.

The economy will be destroyed, and will be global warming.

8. Question about agreement and disagreement: Do you agree with the writer? Why?**Public school A: Acceptable responses**

Yes, because rainforest is very important and become a vital resources in this world.

Yes, because we can't deny that rainforests are essential to our life on earth & very crucial for many aspects of life.

Yes I agree, because the writer wrote all of the advantages from rainforests and disadvantages if there is no more rainforest in this world.

Public school B: Acceptable responses

Yes, the writer says we must keep rainforest because if there are no rainforest, our planet will not balance and there are another disadvantage. So I agree with the writer.

Yes because there is nothing good about losing rainforest, and rainforests are doing it's job even right now as I answer this questions. If rainforests are gone our life will change in a bad day.

Yes, of course. Because the rainforests provide important life sources and we are the ones who use it have to keep and use it in sustainable way.

Private school A: Acceptable responses

Yes, because it's logical.

Agree, because the writer's thinking is the same way as I do.

Yes, that can give the revolution for this world to be good, and make the people know how to protect this nature.

Private school B: Acceptable responses

Yes, I agree, because without rainforest we can't fill necessities of life and rainforest are very important for our lives.

Yes, I agree with the writer. The writer is directing the text to save the rainforests.

Agree. The writer tell us to save the world especially rainforest.

9 Question about summary and conclusion: What can you conclude from this passage?

Public school A: Acceptable responses

What I conclude from this passage is we have to preserve rainforest because rainforests are really important to our life.

I think this passage is open my eyes about that benefits of rainforest and our responsibility to keep and caring our rainforest.

In my opinion, instead of destroying our environment, especially our rainforest, we just need to preserve them for the better future.

I can conclude that now I aware the advantages and the functions of rainforests and now I aware that the rainforests is important for our life.

Public school B: Acceptable responses

We must preserve the rainforest from extinction and more care for nature.

What I conclude from this passage is rainforest was important resources in the world, so we must always keep the rainforest in the world.

Rainforest are very important to our life. Rainforest supports many aspects of our life. We should maintain it.

Private school A and B: Acceptable responses

To conclude, since the rainforest are very crucial to support many aspects of life, it is our duty to preserve them.

We must save our earth and rainforest from destruction, by harvest forest in a sustainable way.

Conclusion of this passage is that saving the rainforest is important and it needs to be preserved. We cannot destroy it.

Appendix 8: The results of interview

Public school A:

1. Question: Do you think the questions in part B made you think?

Responses:

- a. *Ya. Pertanyaan di bagian B membuat saya berpikir dan memberikan pendapat.*
(Yes, they make me think and opine)
- b. *Ya* (Yes)
- c. *Ya* (Yes)
- d. *Ya* (Yes)
- e. *Ya* (Yes)
- f. *Ya* (Yes)
- g. *Ya* (Yes)
- h. *Ya* (Yes)
- i. *Ya* (Yes)
- j. *Ya* (Yes)

2. Question: (If yes) which questions made you think?

Responses:

- a. 1, 2, 4, 5, 6, 7, 8, 9
- b. *Semua* (All)
- c. *Semua* (All)
- d. 4, 5, 6, 7, 8, 9
- e. 1, 2, 4, 6, 7, 8, 9
- f. 1, 4, 5, 6, 7, 8, 9
- g. *Semua* (All)
- h. 1, 2, 5, 6, 7, 8, 9
- i. 1, 2, 4, 5, 8, 9

j. 4, 5, 6, 7, 8, 9

3. Question: Did you find any difficulty in answering the questions?

Responses:

- a. *Ya* (Yes)
- b. *Tidak* (No)
- c. *Ya* (Yes)
- d. *Ya* (Yes)
- e. *Ya, sedikit* (Yes, little)
- f. *Tidak* (No)
- g. *Ya* (Yes)
- h. *Tidak* (No)
- i. *Ya* (Yes)
- j. *Tidak* (No)

4. Question: (If yes) what difficulties did you find?

Responses:

- a. *Ada beberapa kata yang tidak saya mengerti* (I found some difficult words).
- b. -
- c. *Pengetahuan saya tentang topik itu sedikit* (My knowledge about the topic is not limited).
- d. *Saya merasa bahasa Inggris saya masih tidak bagus* (I think my English is still not good).
- e. *Pengetahuan saya tentang topik itu tidak banyak* (I don't have broad knowledge about the topic).
- f. -
- g. *Saya kesulitan menuliskannya dalam bahasa Inggris* (I had difficulty in writing in English).
- h. -

- i. *Saya kadang-kadang mengalami kesulitan dengan grammar* (Sometimes I found difficulty in using grammar).
- j. -

5. Question: What is your opinion if in any lesson you are asked to think?

Responses:

- a. *Sangat bagus karena kita bisa mengeluarkan pendapat* (That's good because we can express our opinion).
- b. *Sangat baik karena bisa meningkatkan pengetahuan saya* (That is good because it can increase my knowledge).
- c. *Saya setuju karena bisa melatih kemampuan berbicara dan membuat saya berani* (I agree with it can practice our speaking skills and make me brave).
- d. *Bagus karena kita bisa mengembangkan pikiran kita* (It's good because we can develop our mind).
- e. *Ya karena bisa meningkatkan pengetahuan kita* (Yes because it can develop our knowledge).
- f. *Bagus karena ada komunikasi antara guru dan murid* (It's good because there is communication between a teacher and students).
- g. *Ya saya setuju karena kita bisa mengekspresikan kita di negara demokrasi* (Yes I agree because we can express our opinion in this democratic country).
- h. *Saya setuju karena guru bisa tahu apa yang ada di pikiran siswa* (I agree because the teacher can know what the students think).
- i. *Ya saya setuju, sehingga saya bisa membantah guru* (Yes I agree, so I can argue the teacher).
- j. *Saya setuju karena kita bisa mengekspresikan pendapat kita dan di masa depan kita harus belajar sendiri* (I agree because we need to express our opinion and I in the future we have to learn by our own).

Public School B:

1. Question: Do you think the questions in part B made you think?

Responses:

- a. *Ya* (Yes)
- b. *Ya, tentu saja* (Yes, of course)

- c. *Ya, sedikit* (Yes, little)
- d. *Ya* (Yes)
- e. *Ya* (Yes)
- f. *Ya, sedikit* (Yes, little)
- g. *Ya* (Yes)
- h. *Ya* (Yes)
- i. *Ya* (Yes)
- j. *Ya* (Yes)

2. Question: (If yes) which questions made you think?

Responses:

- a. *Semua* (All)
- b. *Semua* (All)
- c. 1, 4, 5, 7
- d. 4, 5, 6, 7, 8
- e. 5. 2, 4, 5, 6, 7, 8, 9
- f. 6. 5, 7, 8, 9
- g. *Semua* (All)
- h. *Semua* (All)
- i. *Semua* (All)
- j. *Semua* (All)

3. Question: Did you find any difficulty in answering the questions?

Responses:

- a. *Ya* (Yes)
- b. *Ya* (Yes)
- c. *Tidak* (No)
- d. *Tidak* (No)

- e. *Ya* (Yes)
- f. *Tidak* (No)
- g. *Ya* (Yes)
- h. *Ya* (Yes)
- i. *Tidak* (No)
- j. *Ya* (Yes)

4. Question: (If yes) what difficulties did you find?

Responses:

- a. *Saya kesulitan menemukan kata dalam bahasa Inggris, terutama nomor 3* (I found difficulty in finding words in English, especially number 3).
- b. *Beberapa pertanyaan memuat kata-kata yang sulit dimengerti* (There were some questions that had difficult words to understand).
- c. –
- d. –
- e. *Saya menemukan beberapa kata yang sulit dalam teks* (I found some difficult words in the texts).
- f. –
- g. *Saya menuliskan jawaban dalam bahasa Indonesia kemudian menerjemahkannya ke bahasa Inggris. Kadang-kadang saya merasa ragu apakah bahasa Inggris saya benar atau salah* (I wrote the answers in Indonesian then translated them into English. Sometimes I felt doubtful whether my English was correct or not).
- h. *Beberapa kata sulit* (Some words were difficult).
- i. -
- j. *Saya tidak mengerti nomor 1* (I didn't understand number 1).

5. Question: What is your opinion if in any lesson you are asked to think?

Responses:

- a. *Bagus karena kita bisa belajar mengembangkan pikiran kita dan setiap orang memiliki pendapat berbeda tentang suatu topik* (It's good because we can learn to develop our own mind and everybody has different opinion about a topic).

- b. *Saya setuju karena kita bisa belajar mengekspresikan pendapat kita (I agree because we can learn to express our opinion).*
- c. *Bagus karena bisa melatih pemikiran kita (It's good because it trains our thinking).*
- d. *Bagus karena orang lain akan tahu apa yang kita pikirkan (It's good because people will know what we are thinking about).*
- e. *Bagus, saya pikir kita bisa mengembangkan sendiri apa yang telah diajarkan oleh guru (It's good, I think we can develop ourselves what has been taught by the teacher).*
- f. *Sangat bagus karena pikiran kita bisa berkembang (It's very good because our thinking can develop).*
- g. *Bagus karena penting bila kita kuliah dan bekerja (It's good because it is important when we go to university or work).*
- h. *Bagus karena bisa melatih logika kita (It's good because it can train our logic).*
- i. *Bagus karena setiap orang berhak untuk mengeluarkan pendapat (It's good because everybody has a right to express their opinion).*
- j. *Bagus karena selama ini bila kita mengerjakan soal seperti ini selalu sama. Kita selalu menemukan jawabannya di teks (It's good because so far if we do the exercise like this, it's always the same. We can always find the answers in the text).*

Private school A:

1. Question: Do you think the questions in part B made you think?

Responses:

- a. *Ya, pertanyaan-pertanyaan di bagian B membuat saya berpikir (Yes, they make me think).*
- b. *Ya, tetapi saya baca teks terlebih dahulu, setelah itu mengembangkannya dengan kata-kata saya sendiri (Yes, but first I read the text, then I developed into my own sentences).*
- c. *Ya (Yes)*
- d. *Ya (Yes)*
- e. *Ya, bagian B membuat saya berpikir (Yes, part B asked me to think).*
- f. *Ya (Yes)*
- g. *Ya (Yes)*

2. Question: (If yes) which questions made you think?

Responses:

- a. 1. 4, 5, 7
- b. 2. 4, 5, 7, 8
- c. 3. 1, 5, 7, 8
- d. *Semua* (All)
- e. *Semua* (All)
- f. 6. 5, 6, 7, 8, 9
- g. *Semua* (All)

3. Question: Did you find any difficulty in answering the questions?

Responses:

- a. *Ya* (Yes)
- b. *Ya* (Yes)
- c. *Ya* (Yes)
- d. *Ya* (Yes)
- e. *Ya* (Yes)
- f. *Tidak* (No)
- g. *Ya* (Yes)

4. Question: (If yes) what difficulties did you find?

Responses:

- a. *Kurang perbendaharaan kata-kata untuk menulis pendapat* (Lack of vocabulary to write comments).
- b. *Kadang-kadang saya malas untuk berpikir* (Sometimes I feel lazy to think).
- c. *Kadang-kadang saya mengalami kesulitan dengan perbendaharaan kata* (Sometimes I found difficulty in English vocabulary).

- d. *Berpikir buat saya sulit dan saya menemukan beberapa kata yang sulit* (It was difficult for me to think and I found some difficult words).
- e. *Saya menemukan beberapa kata yang sulit* (I found some difficult words).
- f. -
- g. *Kadang-kadang saya tidak mengerti arti kalimat pada teks tersebut* (Sometimes I didn't understand the meaning of some sentences in the text).

5. Question: What is your opinion if in any lesson you are asked to think?

Responses:

- a. *Ya saya setuju karena saya merasa puas bila saya bisa berpikir dengan mendalam tentang sesuatu* (Yes I agree because I feel satisfied if I can think deeply about something).
- b. *Saya merasa senang bila berdiskusi dan guru menanyakan pendapat saya* (I feel happy when we discuss and the teacher asks my opinion).
- c. *Saya setuju. Tidak masalah buat saya bila ada aktifitas yang meminta saya untuk berpikir* (I agree. I have no problem with activities that ask me to think).
- d. *Bagus karena bisa memperbaiki komunikasi kita* (It is good because it improves our communication).
- e. *Saya setuju dan saya senang untuk memberikan pendapat* (I agree and I like to give my opinion).
- f. *Saya setuju karena bisa melatih pikiran dan keberanian* (I agree because it can practice our mind and courage).
- g. *Saya setuju karena di zaman modern ini kita harus memilih apa yang baik dan buruk* (I agree because in this modern era we can choose what is good or bad).

Private school B:

1. Question: Do you think the question in part B made you think?

Responses:

- a. *Ya* (Yes)
- b. *Ya* (Yes)
- c. *Ya* (Yes)
- d. *Ya* (Yes)

- e. *Ya* (Yes)
- f. *Ya* (Yes)
- g. *Ya* (Yes)
- h. *Ya* (Yes)
- i. *Ya* (Yes)
- j. *Ya* (Yes)

2. Question: (If yes) which questions made you think?

Responses:

- a. 3, 4, 5, 8, 9
- b. 2, 4, 6, 8, 9
- c. 2, 3, 4, 6, 7, 8
- d. *Semua* (All)
- e. *Semua* (All)
- f. *Semua* (All)
- g. *Semua* (All)
- h. *Semua* (All)
- i. 5, 6, 7, 8, 9
- j. 1, 3, 5, 6, 7, 8, 9

3. Question: Did you find any difficulty in answering the questions?

Responses:

- a. *Ya* (Yes)
- b. *Ya* (Yes)
- c. *Ya* (Yes)
- d. *Ya* (Yes)
- e. *Tidak* (No)
- f. *Ya* (Yes)

- g. *Ya (Yes)*
- h. *Ya (Yes)*
- i. *Ya (Yes)*
- j. *Ya (Yes)*

4. Question: (If yes) what difficulties did you find?

Responses:

- a. *Kadang-kadang saya tidak tahu menerjemahkan kata-kata ke dalam bahasa Inggris (Sometimes I didn't know to translate words in English).*
- b. *Kata-kata bahasa Inggris (English vocabulary)*
- c. *Saya pikir bahasa Inggris saya masih tidak bagus untuk menulis (I think my English is still not good to write).*
- d. *Kadang-kadang saya tidak yakin apakah bahasa Inggris saya benar atau tidak (Sometimes I was not sure whether my answer was correct or not).*
- e. –
- f. *Saya merasa bahasa Inggris saya tidak bagus (I feel my English is not good).*
- g. *Saya pikir pengetahuan saya tidak luas (I think my knowledge is not broad).*
- h. *Saya merasa perbendaharaan kata saya tidak cukup (I feel my vocabulary is not enough).*
- i. *Kadang-kadang saya menemukan kata-kata sulit di teks (Sometimes I found difficult words in the text).*
- j. *Bahasa Inggris saya tidak bagus (My English is not good).*

5. Question: *What is your opinion if in any lesson you are asked to think?*

Responses:

- a. *Bagus karena bisa melatih otak kita (It's good because it can train our brain).*
- b. *Bagus karena para siswa bisa mengeluarkan pendapat atau gagasan mereka (It's good because students can express their opinion or ideas).*
- c. *Saya setuju karena bisa membuat siswa berani (I agree because it can make students brave).*
- d. *Saya setuju karena ada komunikasi antara siswa dan murid (I agree because there will be communication between the teacher and the students).*

- e. *Bagus karena kita bisa mengekspresikan pendapat kita* (It's good because we can express our opinion).
- f. *Saya setuju karena bisa melatih kita berargumentasi* (I agree because it can train us to practice our argument).
- g. *Saya setuju karena siswa dapat mengemukakan pendapat mereka* (I agree because the students can express their opinion).
- h. *Saya setuju karena bisa membuat siswa aktif* (I agree because it can make students active).
- i. *Saya setuju karena kita berhak untuk mengeluarkan pendapat* (I agree because we have a right to express our opinion).
- j. *Bagus karena berpikir membuat saya pintar* (It's good because thinking makes me smart).

List of abbreviations

ACT	Activating Children Thinking
ADFs	Asynchronous Discussion Forums
ASEAN	Association of South East Asian Nations
BNSP	Badan Standar Nasional Pendidikan (National Education Standardization Body)
BSE	Buku Sekolah Elektronik (Electronic School Book)
CA	Cognitive Acceleration
CAME	Cognitive Acceleration through Mathematics Education
CASE	Cognitive Acceleration through Science Education
CCTDI	California Critical Thinking Disposition Inventory
CCTST	California Critical Thinking Skills Test
CDA	Critical Discourse Analysis
CELLE	Centre for Excellence for Literacy and Literary Education
CLA	Critical Language Awareness
CLT	Communicative Language Teaching
CoRT	Cognitive Research Trust
CP	Critical Pedagogy
DfE	Department for Education, UK
DoE	Department of Education, South Africa
EFL	English as a Foreign Language
ELT	English Language Teaching
ESL	English as a Second Language
ESOL	English to Speakers of Other Languages
EWCTET	Ennis-Weir Critical Thinking Essay Test
FIE	Feuerstein's Instrumental Enrichment
FSBA	Fisher's Story-Based Activities

HCTSR	Holistic Critical Thinking Scoring Rubric
HE	Higher Education
HIS	Hollands Inlandse School
L1	First Language
L2	Second Language
MEXT	Ministry of Education, Culture, Sports, Science and Technology, Japan
MULO	Meer Vitgebreid Lager Onderwijs
OBE	Outcomes Based Education
PBL	Problem-Based Learning
PBLT	Philosophy-Based Language Teaching
PERC	Political and Economic Risk Consultancy
PKG	Pemantapan Kerja Guru (Strengthening of the Work of Teachers)
P4C	Philosophy for Children
QAA	Quality Assurance Agency, UK
SPTST	Swartz and Park's Thinking Skills
STH	Six Thinking Hats
SWCU	Satya Wacana Christian University, Indonesia
TDL	Traditional Didactic Lecture
TEFLIN	Teachers of English as a Foreign Language in Indonesia
TESOL	Teaching English to Speakers of Other Languages
TSLN	Thinking School Learning Nation
TSQ	Taxonomy of Socratic Question
TSTS	Thinking Skill Thinking Strategy
TTTT	Top Ten Thinking Tactics
UAN	Ujian Akhir Nasional (National Final Examination)
UNDP	United Nations Development Programme
VHO	Voorbereidend Hoger Onderwijs
WGCTA	Watson-Glaser Critical Thinking Appraisal

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