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Malaysian Rural ESL Students Critical Thinking Literacy Level: A Case Study

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Abstract

In recent years, there has been much interest in the development of thinking skills in the education circles in Malaysia. Nevertheless, more effort needs to be placed on providing skills in developing the critical thinking literacy level of English as a second language (ESL) secondary school students, and its implication on the practice of teaching and learning. This is especially so for rural secondary school students. This paper presents findings of a preliminary case study which analyzes the critical thinking literacy level of twenty students of a rural secondary school in Malaysia as measured by the Cornell Critical Thinking Test (CCTTX). Overall, the findings show that students struggled to answer the critical thinking questions posed in the CCTTX. The analysis point to the fact that students encountered problems with questions on 'judging what is assumed in an argument' section of the standardized critical thinking test. Interview responses from students revealed that they found the 71-item-test challenging to answer. Despite the national education agenda to develop world-class thinkers, our study suggests that there appears to be a lack in exposure to thinking-based activities in Malaysian classrooms

Keywords: Rural ESL secondary school students, critical thinking, Cornell Critical Thinking Test

1. Introduction

Many studies highlight the importance of critical thinking skills as a key element for students to excel academically and to be better-equipped to face the realities of the future workforce. In Malaysia, critical thinking literacy is not a new concept in the field of education. Lately, it has gained interest and momentum with the implementation of the current Malaysia Education Blueprint (MEB 2012-2025) and 21st Century Learning Classrooms. One of the key thrusts under students' aspiration in the MEB is to nurture outstanding thinkers (MEB, 2013-2025, p. E-10). This is a major reform in educational practice, moving from mastery of content to more experiential, project-based learning activities (PBL) that promote critical thinking. In fact, the current thinking curriculum is a continuation from previous educational policies such as the Creative and Critical Thinking (KBKK) and the Vision 2020 policies.

In addition to mastery of the basic 3Rs, it is crucial for students in primary and secondary schools to begin to become critical and analytical while reading a text (Mohd Zin, Wong & Rafik-Galea, 2014). Possessing excellent critical thinking skills prepares students to face challenging tasks required in tertiary education. Critical thinking skills can be taught through classroom instruction (Beyer, 2008; Swartz, Costa, Beyer, Reagan & Kallick, 2008). However, to be critical demands a lot of practice not only in the classrooms but also in every aspect of life (Paul, 1993).

Designing and implementing critical thinking teaching strategies is not an easy task even for very experienced teachers (Barak, Ben-Chaim & Zoller, 2007; Smetanov'a, Drblalova & Vităkovă, 2014). In relation to this, much effort is being placed to innovate the Malaysian education system. It is not feasible for critical thinking to be learnt through rote-learning or memorization techniques. Students need to be engaged in tasks that tap their background knowledge and to be able to transfer it to new context of use. These experiences according to the constructivist perspective, are deemed crucial to enable students to construct their own knowledge and at the same time to promote their critical thinking skills (Barak et al., 2007). Thus, teachers play a prominent role in the development of students' critical thinking skills. Teachers therefore should model critical thinking skills Ii order to teach it effectively rather than merely instructing

students to do it or through just defining the skills (Facione, 1990).

In view of the importance of critical thinking to students and its implementation in Malaysian ESL secondary schools, there is a need to assess the current state of critical thinking literacy level of secondary school students, in particular the students in rural areas, before determining the best classroom instruction. No such study to the researchers' knowledge has been carried out in Malaysia to analyze secondary school students' critical thinking literacy level through the use of the standardized Cornell Critical Thinking Test. Teaching strategies can be developed to meaningfully affect the development of students' critical thinking skills based on the findings of such a study. Hence, this paper analyzes the areas in which students appear to be having problems with through the use of the Cornell Critical Thinking Test.

1.1 Theoretical Perspective

One model that illustrates teachers' roles in developing thinking skills is the Cognitive Apprenticeship model which is entrenched within the context of social learning theories. The model according to Collins, Brown and Newman (1989), encourages "learning through guided experience on cognitive and metacognitive, rather than physical, skills and processes" (p.456). In learning via apprenticeship, a more experienced person assists a less experienced person to gain knowledge or skills (Dennen & Burner, 2007). The more experienced or knowledgeable person may not necessarily be the teacher. This can also be true for peers or even parents. Tacit processes such as critical thinking skills become visible through cognitive apprenticeship to a point and students are guided until they are able to independently do it (Collins et al., 1989). Without proper modelling of critical thinking skills, students find it difficult to grasp the essence of being critical thinkers.

2. Review of Literature

2.1 Critical Thinking Curriculum in Malaysia

Content has always been the paramount focus not only in Malaysia but also across all disciplines in various parts of the world (Zohar & Dori, 2003). Despite the national education agenda on the implementation of the Higher Order Thinking (HOT) curriculum, thinking skills inclusive of critical thinking are positioned at the periphery as minor learning outcomes. It is a norm that only the skills and content tested in examinations particularly national standardized examinations become the focal interest in comparison to those deemed as untested skills and content (Barak et al., 2007; Koo, Wong, & Ismail, 2012; Preliminary Report Malaysia Education Blueprint 2013-2025). Apart from that, some teachers do not display the capability to teach HOTs as envisioned in the Malaysian KSSR (primary school) and KSSM (secondary school) curriculum (Tan & Halili, 2015). It requires teachers to cater to diverse needs of students, such as the need to formulate individualized lessons and for materials which differ from didactic teaching methods (Preliminary Report Malaysia Education Blueprint 2013-2025). Thus, there is a discrepancy between what is widely practiced in the country based on the latest educational curriculum.

Reform efforts have actually started since the 1990s (Rajendran, 2001) in accordance with the National Philosophy of Education, to produce individuals who are balanced intellectually, spiritually, emotionally and physically. Explicit goals of teaching thinking skills in schools were officially posited in 1993 (Rajendran, 2001). These initiatives were in support of the Vision 2020 which aimed to develop Malaysia. It was a wide-scale program where teachers were trained with the concept of Creative and Critical Thinking as an effort to move away from didactic teaching towards a more stimulating education that enhanced critical thinking and creativity. The fact is that many of the previous policies still remain relevant up to now (Malaysia Education Blueprint 2013-20125). However, the implementation of these policies appears to be challenging.

The Malaysia Education Blueprint (2013-2025) aspires to produce exceptional thinkers. Much effort is being geared towards introducing programs that are expected to nurture the thinking culture. Nevertheless, in order to plan effectively, it is imperative to conduct a needs assessment to identify the current state of students' critical thinking literacy level as well as their ability, interest and attitude. Therefore, there is a need to understand the present dilemma faced by secondary school students especially those in the rural areas who may not have a complete understanding of the concept of critical thinking. As most of the rural children come from a background where the learning of English is only carried out through English lessons in school (Azman, 1999). Rural secondary school students find the need to demonstrate critical thinking skills as a major setback. With the current development in the curriculum, critical thinking ability is necessary not only for ESL classrooms, but also across all other subjects. Most importantly it has to be viewed as a means to survive in today's continuously changing world in order for these students to be and be part of a knowledgeable skilled workforce.

2.2 What is Critical Thinking?

Despite the plethora of studies advocating the significance of teaching critical thinking, teachers and students still have a vague understanding of what critical thinking is. Hence, it is crucial to ascertain the basic concepts of critical thinking. One well-cited and comprehensive definition is that by the 'Delphi Report', which is a two-year research project on critical thinking involving 46 thinking experts from various disciplines. These experts defined critical thinking as "purposeful, self-regulatory judgement which results in interpretation, analysis, evaluation and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgement is based" (Facione, 1990, p. 2). The report also proposes how critical thinking should be taught and assessed.

It is also noteworthy to mention that some of these experts have posited their own definitions of critical thinking. For

example, Paul (1993), defined critical thinking as "purposeful thinking in which a thinker systematically and habitually imposes criteria and intellectual standards upon thinking" (p.21). His list comprises ten elements of thoughts. In tandem with his definition, is Halpern's definition of critical thinking as purposeful, reasoned and goal-directed thinking (2013). In short, students need to have a disciplined mind in order to be critical thinkers. It is not a set of skills to be memorized but to be internalized in and transferred to all aspects of life.

Ennis (1985) refers to critical thinking as the logical and reflective thought in deciding what to believe and what to do. His comprehensive taxonomy of critical thinking comprises twelve abilities and fourteen critical thinking dispositions. Among other critical thinking skills, his basic concepts of critical thinking, the ability to clarify, the ability to seek and judge well as the basis of a view, and the ability to infer are tested in his general thinking test, the Cornell Critical Thinking Test Level X. Thus, the present study incorporates his model as the main reference.

Although there is a lack of consensus on the definitions as well as the characteristics of critical thinking (Abrami et al., 2008; Bernasconi, 2010) to a certain extent, some aspects of critical thinking are similar (Bernasconi, 2010). Critical thinking maximizes the use of cognitive strategies and the concern is the process of accomplishing a task, and not so much on the physical outcome. To add, majority of critical thinking works promote the idea of the ability to transfer the critical thinking skills to other aspects of life such as the workplace and daily activities to the extent that being critical is part of becoming a civilized citizen (Ennis, 1989; Facione, 1990; Fisher, 1999, Paul, 1990; Teo, 2014). Thus, it is necessitated in all workplaces, across all disciplines as well as an indispensable learning outcome in education (Dori, Tal & Tsaushu, 2003; Ganapathy & Kaur, 2014; Smetanov'a et al., 2014; Tan & Halili, 2015).

2.3 Fundamental Principles in Teaching Critical Thinking

To articulate the principles of critical thinking is relatively easy. On the contrary, to apply these principles as classroom instructions is substantially hard. Such thinking lessons require meticulous preparation prior to the lesson. The implication is that teachers tend to resort to an easier alternative. Teachers' role is deemed pertinent on the development of students' critical thinking skills. In addition, to the understanding of the concept, teachers need to model the thinking dispositions as well as the thinking habits (Facione, 1990; Fisher, 1999).

Based on studies conducted by numerous thinking experts, the fundamental aspect in teaching a thinking skill is to shift the focus of the lesson to the respective skill itself (Beyer, 2008; Perkins & Salomom, 1989; Swartz et al., 2008). Teachers must demonstrate these skills in the actual context of use and not merely providing their definitions. Therefore, it is crucial that teachers possess a good understanding of critical thinking (Fisher, 1999, p.61). Scaffolding via the modelling strategy is an alternative for teachers to preview and demonstrate the skill. Consequently, the skill will be salient to the students.

Besides being the main outcome of a lesson, familiar content helps boost students' understanding of the stipulated skill. In support of the infusion approach, critical thinking skills should be taught in a specific area of content (Ennis, 1989). The present study for instance, specifically focuses on the teaching of critical thinking in ESL classrooms. In order to think, one requires substance to think about.

Most importantly, the procedural steps in teaching a skill must be explicitly stated (Beyer, 2008). Strategies most be commonly employed as to ensure the saliency of the critical thinking skills such as modelling, metacognition reflection and thinking aloud (Swartz et al., 2008). Absence of these principles in the teaching of critical thinking will result in failure to grasp its basics.

2.4 Critical Thinking Assessment

Similarly, to the teaching of critical thinking, assessing it raises issues concerning validity and reliability of existing tests. Critical thinking test is not merely arriving at the correct answer (Ennis, 1989; Facione, 1990). More importantly, the focus should be on the process of how students arrive at the answer. Again, there is not one comprehensive test which covers all aspects of critical thinking. Thus, in selecting a test, it is recommended to analyze the aspects of critical thinking the assessment aims to test (Facione, 1990). In selecting the test to assess the participants of this study, the researchers had to consider a few factors such as the language used in devising the test items, the participants' age and the process of testing. The main factor influencing the choice is definitely the validity and reliability of the Cornell Critical Thinking Test (CCTTX). Some of the studies involving elementary, middle and junior high school students are those carried out by Lumpken, (1990), Kezar, (1991) and Sidney, (1989). Based on these studies, older students generally perform better than the younger ones.

In an unpublished PhD dissertation by David Kettler, (2012), the Cornell Critical Thinking Test Level X was conducted together with the Test of Critical Thinking on a group of Fourth Grade students in North Texas. Both tests are utilized to analyze the relationship between cognitive ability, academic achievement and critical thinking of gifted students and general education students. Most interestingly is the significant relationship between the two measures of critical thinking. Therefore, it indicates the reliability of CCTTX as compared to another critical thinking test. Most studies reported that the Administration Manual of the Cornell Critical Thinking Test involves participants whose first language is English and mainly are conducted in schools in the United States of America.

In a study comparing the performance of two randomized groups of school students, ages ranging from 12 to 14 years old, from two different origins: Korea and the United States of America the validity of the CCTTX was measured and its probable differential item functioning (DIF) was analyzed. Findings showed that the items tested function similarly

despite the different groups tested. Only 14% of the test items displayed DIF. The study did not mention students' performance in the CCTTX (French, Hand, Nam, Hsiao-Ju & Vazquez, 2014).

In Malaysia, a study was conducted on 261 University of Technology MARA Pahang second year diploma students to identify students' level of critical thinking skills (Ismail, Abdul Aziz & Husin, 2007). Students sat for the CCTTX as to measure their critical thinking skills. Data elicited revealed that students did not have satisfactory mastery of critical thinking skills, thus, questioning the success of teaching the thinking curricula in Malaysia. In reference to the findings of the aforementioned study, there is a need to assess the present critical thinking literacy level of secondary school students before pursuing to provide a platform in devising effective programs, lesson plans and materials to foster critical thinking skills among ESL secondary students in Malaysia. In another project in Malaysia, Sahamid (2016) conducted a study among her Form 4 students (n=24), aged 16 for a duration 5 months consisting of 16 one-hour literature lessons. Sahamid's objective was to aid students to respond to her questions through a model of Socratic Questioning (Paul, 1993), claimed to be helpful in developing critical thinking skills. The analyses of her field notes, student interviews, and written tasks showed a positive influence of repeated practice of Socratic Questioning on student responses and written tasks.

The current study employed the Cornell Critical Thinking test to analyze secondary school students' critical thinking literacy level, and at the same time, to identify areas of critical thinking where ESL students have fallen short. The findings can be an indicator of the gap between theory and practice which raises concern in the educational field. The present study also involves ESL Malaysian rural secondary school students which poses a new challenge in administering the Cornell Critical Thinking Test in a different setting where English is the second language and critical thinking is not a concept commonly practiced in ESL classrooms.

3. Method

This study sought to investigate the critical thinking level of the rural ESL secondary school students and to identify areas of critical thinking skills these students lack.

3.1 Research Design

The study employed a case study design in view of the explanatory nature of this study that is to analyze rural ESL secondary school students' critical thinking literacy level. In addition, the study aimed to identify the areas students had problems with on the test and to suggest ways to encapsulate these critical thinking skills together with that of subject-matter. The findings of this case study would provide insights on the current state of critical thinking levels of secondary school students. At the same time, it has the potential of reviewing what is currently being practiced in the ESL classrooms. This would be relevant to a range of stakeholders especially the ESL teachers and students in school, teacher trainers, curriculum developers and policy makers in the Ministry of Education.

3.2 Research Sample

A sample of twenty Form 4 students in an intact group from a rural secondary school in the district of Ledang were selected. All students do not come from an English-spoken background. On the other hand, the participants were identified based on purposive sampling whereby they are the best group of students with good PT3 English results as to ensure that students will not find language as a barrier while answering the Cornell Critical Thinking test. PT3 is the latest standardized school-based assessment for Form 3 students. In addition, this batch of students have undergone the school-based assessment system where thinking skills have been explicitly integrated into the syllabus.

3.3 Research Instrument

The main research instrument employed in this study is the Cornell Critical Thinking Test, a 71-item standardized critical thinking test. It was carefully selected to suit the age level of the participants in this study. The test is meant for Grades 4 to Grades 14 comprising of four sections covering induction, credibility, observations and assumption identification. It is designed for evaluation and in teaching experiments for appraisal of the critical ability of a group as well as a criterion for program admission (Administration Manual of Cornell Critical Thinking Test, p. 1). Moreover, it is easily administered in comparison with other critical thinking tests which require candidates answer questions online or required individual registration online. The present research site is a rural school with limited internet access. Therefore, there are a number of factors which needed to be considered in selecting the critical thinking test. Apart from that, the Cornell Critical Test language is more comprehensible compared to the language of other critical thinking tests such as the California Critical Thinking Test and the Halpern Critical Thinking Assessment (HCTA). The researchers needed to take this into consideration as English is the second language in Malaysia. This is to ensure that language would not pose a problem to participants as they answer the questions. Most importantly, numerous studies have been conducted to explicate the test validity and reliability (refer to Administration Manual of Cornell Critical Thinking Test). Therefore, the Cornell Critical Thinking Test is seen as the best option to measure the present state of critical thinking literacy level of selected Malaysian rural ESL secondary school students.

3.4 Research Procedure

Prior to administering the Cornell Critical Thinking Test, the researchers went through the Cornell Critical Thinking Test Administrative Manual thoroughly in order to familiarize themselves with the test components and to understand the test procedures. The test has to be conducted section by section and each section has a time limit. Nevertheless, it

can either be administered as a timed test or open test. The researchers conducted the test on a group of ten Form 4 students prior to the actual group of test participants, taking into account that the participants are ESL students who would require more time to comprehend each item.

While conducting the Cornell Critical Thinking Test, the researchers followed the test manual closely and provided explicit instructions to the students throughout the test. Students were not informed earlier of the critical thinking test. Time suggested for Section A and Section B was 20 minutes respectively while 12 minutes for Section C and D. Before conducting the test, students were asked to share their ideas about critical thinking to enable the researchers to gain some input on their general understanding of critical thinking. The researchers briefed the students on the whole test procedure. They were reminded to adhere to the instructions and to mark their answers on the answer sheets provided. An extension of five minutes was allotted to each section. At the end of the session, students were asked to give feedback on the Cornell Critical Thinking Test.

4. Results

This section presents students' level of critical thinking as measured by four distinct sections of the Cornell Critical Thinking Test. The results are discussed according to the research questions posed.

4.1 Students' Critical thinking level

The CCTTX consists of 71 items. In order to interpret students' level of performance, the scores are divided into four categories of *excellent*, *high*, *average* and *low* (Ismail et al., 2007). Table 1 reports the overall findings from the CCTTX.

Table 1. Students' CCTTX overall test scores based on frequency (n = 20)

Scores	Level	Frequency	Percentage
56-71	Excellent	0	0
38-55	High	5	25
19-37	Average	14	70
0-18	Low	1	5
Total	-	20	100

Out of the 20 students, a majority (70%) scored at an average level (19-37), a quarter scored at a high level (38-55), while none were able to score at an excellent level on the critical thinking test. These results indicate that the students' critical thinking level, based on the CCTTX scores, is of an average level. The results in Table 2 shows the mean score achieved by the students (M = 33.85, SD = 6.25) which pointed to their average critical thinking level.

Table 2. Summary of CCTTX Scores (n = 20)

	Min	Max	Mean	Std. Deviation
CCTTX Scores	17	44	33.85	6.25

In short, our findings reveal that although the students in this present study possess the ability to think critically, majority performed at substantially low levels in terms of their critical thinking ability.

4.2 Lack of critical thinking skills

An analysis of each section of the CCTTX was conducted to determine the areas of critical thinking skills that the ESL students failed to demonstrate an ability to comprehend. Figure 1 illustrates students' inability to answer each respective section of the CCTTX. After analyzing each item in every section, the overall analysis indicates that 67% of students were not able to answer Section IV that targets identification of assumptions, followed by Section II (56.04%) which requires students' observation to identify the credibility of the source of information. The findings reveal that 49.64% failed to answer the items in Section III that is related to making deductions. The lowest occurrence of mistakes was made in Section I where 48.26% of students were unable to make inductions.

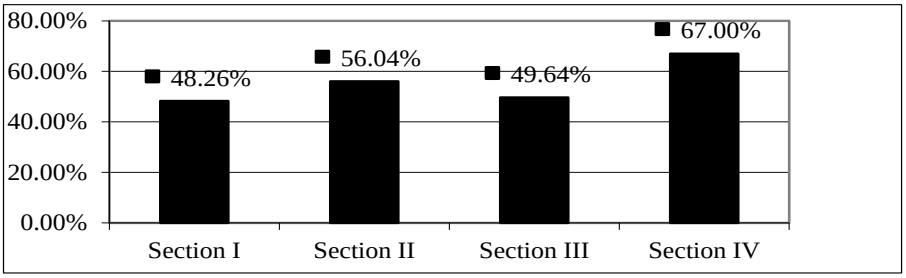

Figure 1. Students' incorrect answers to Sections I-IV of the CCTTX

What follows is a more detailed account of the results for each section. Section I of the CCTTX aimed at testing students' induction skills, also known as hypothesis testing. In this section, students need to determine whether a fact supports either one of the three statements given. In testing a hypothesis, students must assess claims and arguments presented. According to the Administration Manual of the test, this section should not pose a problem to students as it is a general-content test (p. 43). Our findings showed that more than half the students managed to answer almost half of the items (including items 4, 6, 9-13, 15 and 18) correctly (Figure 2).

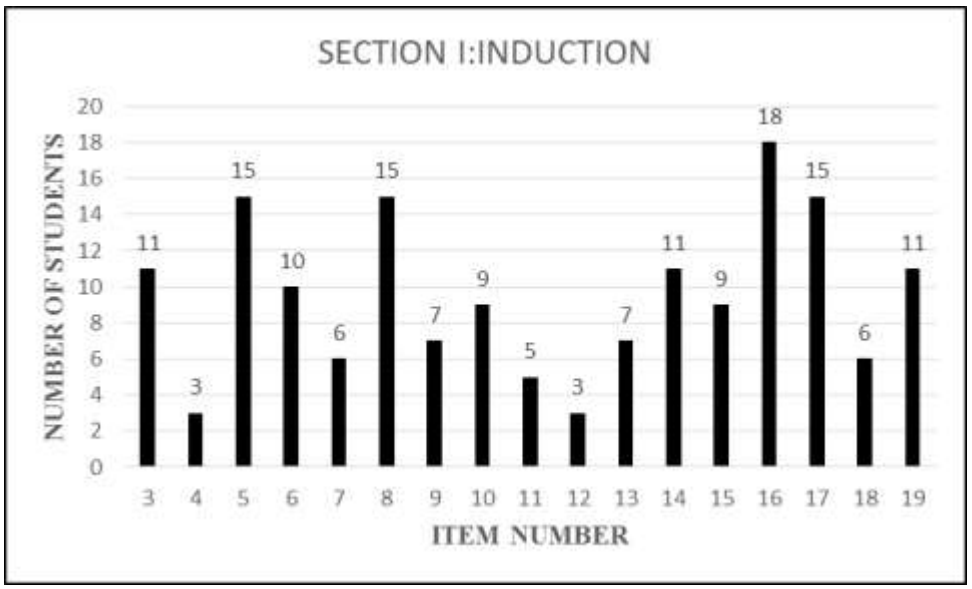

Figure 2. Students' incorrect answers to Section I

Section II assesses students' ability to judge the credibility of sources and the ability to observe. In Section II, students need to judge to what extent to believe a statement made by someone. Figure 3 illustrates the frequency of incorrect answers given to this section.

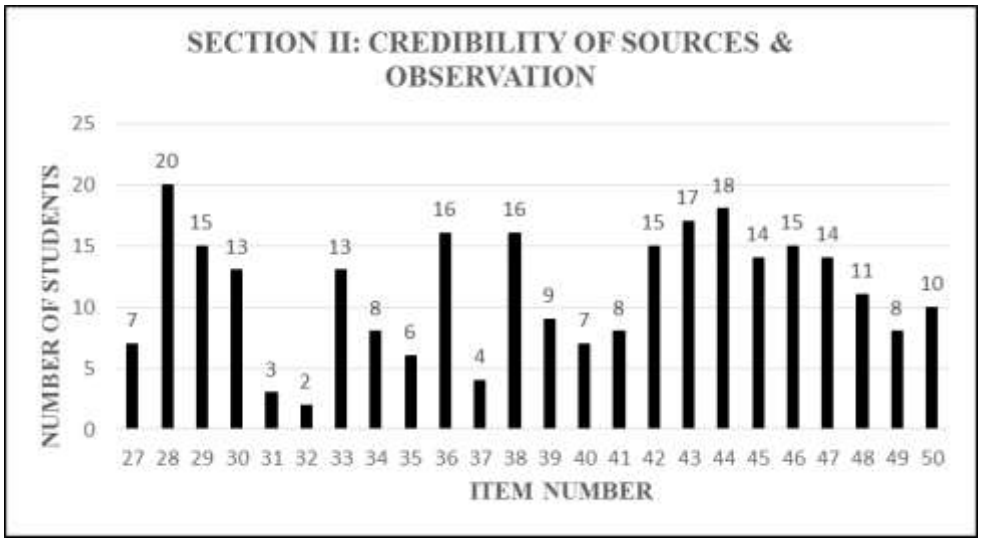

Figure 3. Students' incorrect answers to Section II

It is noteworthy to highlight item 28 which all the students failed to answer correctly:

Item 28:
A. The mechanic says, "The water looks clear."
B. The health officer, after making tests, says "The water is safe to drink."
C. A and B are equally believable.

Students were required to choose which statement is more believable. Surprisingly, students were misled by the credibility of the speaker rather than carefully observing the statements made by them. Out of 20 students, 13 had chosen the option B due to the credibility of the Health Officer who stated that the water is safe to drink whereas 7 students opted for C. They felt that both the Mechanic and the Health Officer's statements were equally believable. Option A, which is the right answer, is a statement made by the Mechanic, 'The water looks clear'. He is only referring to the appearance of the water without talking about safety issues. Hence, students need to observe all aspects of given statements and not to make assumption and judgement based on one perspective. This is definitely relevant in our world today where information abounds, not to easily believe without determining its credibility.

Section III of the test requires students to make deductions or interpretations. According to Figure 1, the frequency of students' incorrect answers to Section III (49.64%) was almost similar to that of Section I (48.26%). According to Facione (1990), in making interpretations, one needs to categorize, decode statements and clarify meaning. In this particular section, students need to interpret the clarity of a statement before deciding which other statement would probably be true. In a way, students need to be critical in evaluating a statement, without questioning whether the information presented is actually true. Figure 4 shows the frequency of students' inaccurate answers to Section III. The results show that the students found it rather difficult to answer the items in this section (Figure 4).

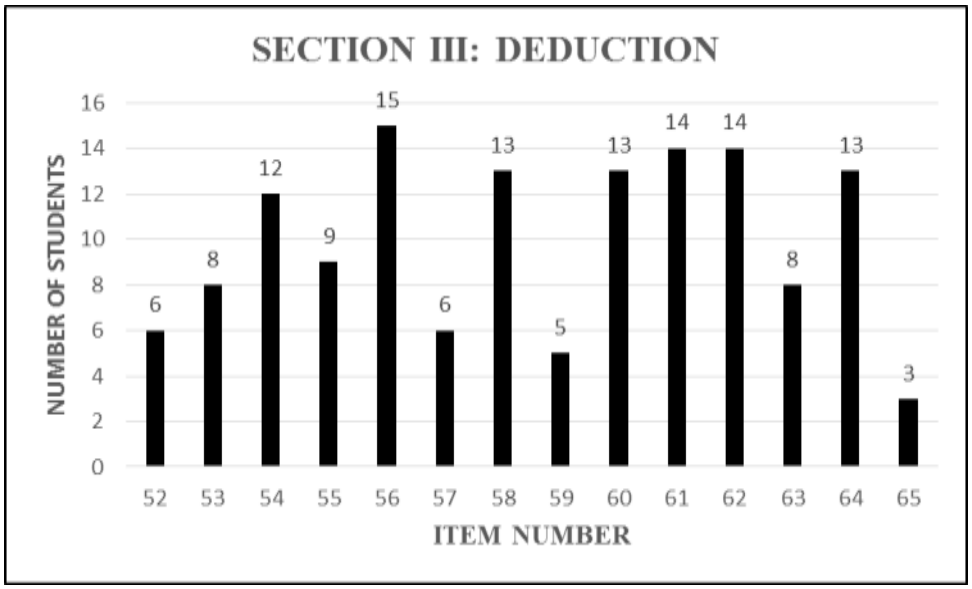

Figure 4. Students' incorrect answers to Section III

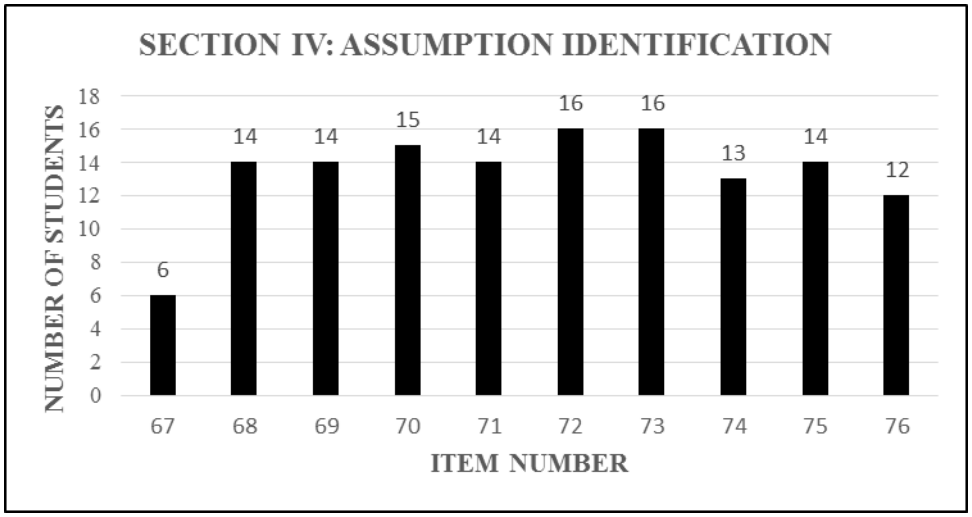

Figure 5. Students' incorrect answers to Section IV

Finally, Section IV necessitates students to exercise their reasoning skills as to fill a gap. In order for students to

identify assumptions, they need to take into account their previous knowledge of the situation or matter (Ennis, 1983). Thus, students must be critical of all the facts presented to them and possess strong analytical skills. As the results in Figure 5 indicate, on average the students found the 10 items in Section IV the most challenging to answer. More than half of the students were unable to answer correctly except for item number 67 which 14 out of 20 students were able to answer.

The CCTTX Administrative manual also indicates that high school students with the ability to 85% answer Sections I and II correctly, have achieved mastery level of critical thinking (p. 43). On the contrary, this is not the case in this study. Table 3 reports students' achievement for Sections I and II.

Table 3. Total scores and percentage of correct answers for Sections I and II

Student ID	Total score	Percentage	Student ID	Total score	Percentage
1	13	28	11	29	62
2	11	23	12	15	32
3	28	60	13	28	60
4	24	51	14	21	45
5	23	49	15	19	40
6	21	45	16	28	60
7	20	43	17	20	43
8	28	60	18	25	53
9	22	47	19	26	55
10	20	43	20	21	45

As indicated by Table 3, none of the subjects in this study achieved 85 percent of correctness in answering Sections I and II which are supposedly general content of a critical thinking test. The highest total score for both sections is 29; that is, 62% of correctness while the lowest total score is 11 (23% of correctness). The mean of the total scores is 22 with an average of correctness percentage of 47%. Despite having the ability to think critically, students do not demonstrate mastery level of critical thinking. One possible reason could be that these students are not explicitly exposed to skills related to critical thinking and lack of practice. In addition, students' lack of practice may be attributed to classroom instructions practiced in schools that only focus on the mastery of content (Paul, 1990; Barak et al., 2007). It can be seen from students' responses that they were not familiar with critical thinking activities which require active engagement with the text as well as collaborative work.

5. Discussion and Conclusion

One fundamental issue which needs to be addressed in order to develop ESL students' critical thinking skills is classroom instruction. Based on the findings of the present preliminary study, it seems logical to conclude that students are not familiar with critical thinking tasks and do not demonstrate the expected critical thinking literacy level. Identifying assumptions which requires sound reasoning skills is deemed crucial not only in English lessons but also in other school subjects. Reasoning is the core of critical thinking; indeed, critical thinking has been defined as thinking that is reasonable and reflective (Ennis, 2011).

In depth analysis of CCTTX sections illustrated students' lack of ability in deciding the credibility of information. Their responses demonstrate the inability to view things from multitude of perspectives. To add, students need to continuously think critically from one situation to another. As they were prohibited to return to questions that they had attempted, they had to be confident when attempting each item.

As they are so used to didactic teaching methods, Malaysian ESL secondary school students are expected to answer questions based on the provided answer scheme (Tan & Halili, 2015). The reliance on lower order thinking skills (LOTs) does not nurture higher order thinking (HOT), or critical thinking skills (Paul, 1990). This is a practice that does not allow students to be independent, critical thinkers. On the contrary, teachers who purposely promote the use of HOT persistently will not only enhance students' higher-order thinking skills but also build students' self-confidence (Barak et al., 2007; Ganapathy & Kaur, 2014).

It is also crucial to bridge the knowledge learned in each lesson and make connections with other situations (Barak et al., 2007; Fisher, 1999). One of the focal objectives in teaching critical thinking is to foster students' ability to transfer this knowledge and its application across disciplines and domains (Halpern, 2013; Zohar & Dori, 2003). Being able to demonstrate this ascertains the quality of a critical thinker.

Obviously, teachers can play a significant role in promoting the critical thinking curriculum. Teachers must conceptualize critical thinking skills explicitly and apply diverse instructional strategies. Connecting topics introduced in class with students' daily activities and interests promotes class discussions and project-based learning that enhance students' critical thinking skills (Barak et al., 2007; Facione, 1990; Zohar & Dori, 2003).

In addition, teachers' beliefs and practices in promoting critical thinking ensure students' mastery of these skills (Atkinson, 1997). As recommended by the Delphi Report, the teaching of critical thinking requires a teacher to model the proper use of critical thinking skills, and at the same time, encourage students to be curious, and to begin asking questions as a means to inquire for knowledge (Facione, 1990). Students must be exposed to the critical thinking curricula in order for them to survive and fulfill the demands of the current society.

To a certain extent, the findings of this study cannot be generalized to all ESL classrooms in Malaysia. Nevertheless, there is a need to analyze the current state of secondary school students' critical thinking ability so that viable teaching strategies could be devised to develop their skills.

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