

Secondary school teachers' perspectives on the teaching of critical thinking in the English Language Classroom

Ravinder Mohan Sharma

Bendemeer Secondary School
Singapore

Abstract

In this 21st century teaching and learning environment, much emphasis has been placed on the attainment of critical thinking due to the demands in today's workplace. While there are other platforms in which critical thinking can be developed, teachers can play a role in its development as well. It is thus important to understand teachers' perspectives of critical thinking, and their practices for teaching critical thinking. This could help provide some insights into the situation faced by teachers in the teaching of critical thinking. In this study, an embedded multiple-case design featuring three English Language teachers was used. The teachers were interviewed once prior to their lessons being observed and once after the lessons. The data was content analysed and interpreted. A within-case analysis and cross-case analysis were done. Five themes were proposed as a result of the cross-case analysis. Commonalities and differences among the three teachers and their practices are discussed. Finally, a key constraint is addressed, and some possibilities are explored.

Introduction

Critical thinking is a common focus of practically all models for 21st Century skills, and is highly valued across different subjects (Fulmer & Yeo, 2014). It is considered important because it assists learners to reflect on their decision-making and problem-solving across situations in which other 21st Century competencies are needed (Feldman, 2002; Halpern, 1998).

In addition, from a practical standpoint, national governments and employers have argued that it is important for all sectors of education to prepare individuals that are able to think well for themselves (Pithers & Soden, 2000). These workers need to be problem solvers who are quick to learn, flexible, and able to add value to their organisations (Harvey, Moon, Geall, & Bower, 1997). In addition, rapid changes in social and technological opportunities (Cheak, Douglas, & Erickson, 2001; Fok, 2002) will require future school leavers to contend with the unknown, and solve problems that may not exist today (Boud & Falchikov, 2006).

Levy and Murnane (2004) have argued that there is a steep decline in demand for the easily taught and tested routine cognitive skills, and an increase in occupations requiring greater intensity of cognitive abilities, specifically with regard to non-routine tasks that are analytical and interactive. Therefore, it is critical to note that intellectual capital is the basis for competitive advantage, with every level of the labour force engaging in thinking and innovation (Fulmer & Yeo, 2014) and therefore, critical thinking is now seen to be of even more importance. Young people can learn critical thinking

through many platforms and not just in school and so, while it is not only the teachers' job to teach critical thinking, they can play a part in doing this. The challenge is to ensure that students pick up key critical thinking competencies that can make a difference to their country.

However, the teaching and schooling environment is complex with many intervening factors (Puntambekar & Hubscher, 2005). The assumption is not made here that teachers are doing an ineffective job in teaching critical thinking. Therefore, what needs to be more clearly ascertained is what goes on in the classroom when the teacher develops and enacts the curriculum. For the purposes of teaching critical thinking, teaching practices need to be determined. Such practices could include asking questions to deepen thinking, developing inferences, helping students to form deductions and conclusions after analysing information, probing students' thinking to question assumptions, and teaching students to determine flaws in reasoning. There needs to be a greater understanding of what practices exist in the present day situation where we can look deeper into the issues, tensions, complexities and learning points faced by teachers, and glean useful insights for the educational fraternity into what needs to be done to develop critical thinking.

Literature Review

Teachers' perspectives

The 21st century skills movement in which schools have begun teaching skills relevant for the 21st century has taken off in earnest in many countries. Critical thinking has been identified as a key competency to be taught and this is reflected in important 21st Century learning frameworks put up by the Partnership for 21st Century Learning (Kay, 2009), and by the Organisation for Economic Co-operation and Development (Ananiadou & Claro, 2009). Countries such as Singapore have also adapted such frameworks for their national context and have included critical thinking as a necessary competency to teach. The Curriculum 2015 framework (Ministry of Education, 2010) initiated by the Ministry of Education in Singapore highlights the need for students to develop the desired outcomes of education and 21st century competencies such as critical thinking. This provided the basis and necessity to teach such competencies at the classroom level.

In implementing the required lessons to teach critical thinking, teachers will also have prior perspectives about what constitutes critical thinking and thus set lessons based on those perspectives. This is an area that needs closer attention as, in certain cases, the fundamental philosophy behind the lessons many teachers have developed for critical thinking may not be based on more recent and established theories on critical thinking. For example, critical thinking has now been widely accepted to include both cognitive and dispositional elements (Ku, 2009; Perkins & Ritchhart, 2004); however, some teachers may believe that critical thinking involves only cognitive elements (Stapleton, 2011).

Pajares (1992) has pointed to the experiences teachers had as pupils and students as the origin of teacher perspectives on teaching and learning, suggesting socialisation as the mechanism by which teacher beliefs about education are formed. Students absorb beliefs from their parents and teachers and, as teachers, pass them on to future generations of students. These beliefs could be further developed as the teacher undergoes the undergraduate or pre-service teaching training that lays the foundation of many of their perspectives. It should also be remembered that the more implicit and experiential a belief is, the less likely it can be changed easily (Brown, 2008).

Definitions of critical thinking

For this study, a definition of critical thinking will be attempted after a review of the literature. However, a consistent and widely accepted definition of critical thinking may be hard to pin down

from the vast amount of literature about critical thinking (Ennis, 2008). Indeed, the concept of critical thinking is vague despite the many attempts that have been made to illustrate it. However, it is still useful to discuss the various ideas scholars have written about critical thinking to establish some acceptable understanding.

The cognitive component was focused on in early definitions of critical thinking (Ku, 2009). Critical thinking was seen as a skill, a set of skills, a mental procedure, or just another term for rationality (Baron, 1985; Ennis, 1962; Ku, 2009; McPeck, 1981). Thinking techniques and formal logic dominated the definitions (Ku, 2009). Critical thinking in most formal definitions was seen to be the application of higher-order thinking skills which included problem identification and problem solving, inference, analysis, synthesis, and evaluation. In critical thinking, “all assumptions are open to question, divergent views are aggressively sought, and the inquiry is not biased in favour of a particular outcome” (Kurfiss, 1988, p. 20).

Later, scholars added the dispositional traits to the cognitive skills in identifying successful critical thinkers. In understanding what critical thinking is, it is as important that people’s attitudes, motivations, commitments and habits of mind are looked at as is their thinking (Ku, 2009; Perkins & Ritchhart, 2004). Students must also be able to demonstrate dispositions towards critical thinking,

Table 1

Aspects of critical thinking

Critical thinking aspects	
Cognitive	Dispositional
<ul style="list-style-type: none"> • Thinking inductively • Thinking deductively • Determining reality and fantasy • Determining benefits and drawbacks • Identifying value statements • Identifying points of view • Determining bias • Identifying facts and opinions • Determining warranted and unwarranted claims • Recognising assumptions • Recognising fallacies • Identifying ambiguities • Identifying exaggeration • Determining the strengths of arguments • Determining the accuracy of presented information • Judging essential and incidental evidence • Determining relevance • Identifying missing information • Judging the credibility of sources • Detecting inconsistencies in arguments 	<ul style="list-style-type: none"> • Asking questions and questioning assumptions • Demonstrating inquisitiveness • Showing open-mindedness • Demonstrating self-confidence • Being truth-seeking

Adapted from: Bowers (2006), Facione (2006), & Ku (2009)

which include inquisitiveness, open-mindedness, self-confidence, and truth-seeking (Bowers, 2006; Facione, 2006).

Thus, taking into account the literature, for the purposes of this study, the definition of critical thinking includes both the cognitive and dispositional aspects. It is encapsulated in Table 1.

Teaching critical thinking

In this section, we will look at two areas: at what context critical thinking is taught, and at what is taught. The contextual question is addressed first.

Ennis (1989) highlighted four approaches to teaching critical thinking: the general, infusion, immersion, and mixed approaches. The central aim of the general approach is the teaching of critical thinking outside a subject content area. In this approach, critical thinking is taught as a supplementary course (Cheak et al., 2001; Ennis, 1989). Through the infusion approach, which involves deep, thoughtful subject matter instruction, critical thinking skills are taught using the content and context in which to use them (Cheak et al., 2001). The disadvantage in such an approach is that learners may not engage in issues or problems that are beyond their subject disciplines and thus require answers of different kinds to those in the particular subject (Bailin, Case, Coombs, & Daniels, 1999). In contrast to the infusion approach, students taught through the immersion approach are not explicitly taught critical thinking principles but are given the same rich content and context (Cheak et al., 2001). Ennis (1989) favoured the fourth approach, the mixed approach. The students are involved in the infusion approach and are taught critical thinking principles explicitly (Cheak et al., 2001; Ennis, 1989). In other words, they are taught critical thinking within the context and content of the subject and also learn critical thinking as a course on its own.

Willingham (2007) opined that it is inconceivable to teach critical thinking without factual content, seeing that the processes of thinking are interconnected with the content of thought. Indeed, Bailin et al. (1999) claim that we can best teach critical thinking by infusing it within any curricular practice in which students are involved. Abrami et al. (2008) agree that the most effective teaching of critical thinking occurs in the context of other subjects rather than in a critical thinking course on its own. In their meta-analysis on critical thinking that looked at 117 studies with 20,698 participants, Abrami et al. (2008) reported that the mixed method, where critical thinking, as mentioned earlier, is taught as an independent course while also being taught in the context of a specific content course, has the largest effect, further reinforcing the positive nature of the teaching of discipline-based critical thinking. Critical thinking abilities can be developed more effectively in the course of teaching subject-matter content and they are strongly connected (Bereiter & Scardamalia, 1993; Bonnett, 1995; Chi, Glaser, & Farr, 1988; Pithers & Soden, 2000). Zimmerman (2000) argues further that practising critical thinking across contexts can support critical thinking across disciplines.

However, not all scholars concur that discipline-based critical thinking instruction is more effective than standalone critical thinking instruction. There can be merits in promoting such standalone instruction. Black (2012) showed that, in a study involving A-level students receiving standalone critical thinking instruction, there was some evidence to support the idea that critical thinking, even when taught on its own, could promote skills and enhance academic achievements across a wide variety of other domains.

Critical thinking in the single subject discipline (i.e. English Language) setting

For the purposes of this study, the teaching of critical thinking is looked at in a single subject discipline. This was done as it may be very difficult to study teachers' perspectives of the teaching of critical thinking across various subject disciplines, and it could be useful to have a closer examination of the similarities, patterns, and differences in teaching critical thinking within the context of the same subject.

Several scholars concur that the development of critical thinking should be based within a subject discipline for more effective critical thinking to be developed compared to having critical thinking taught as a separate component of the curriculum (Abrami et al., 2008; Bailin et al., 1999; Bereiter & Scardamalia, 1993; Bonnett, 1995; Brookfield, 1997; Chi et al., 1988; Ku, 2009; Pithers & Soden, 2000; Renaud & Murraru, 2008; Willingham, 2007).

In this study, the English Language classroom was chosen as the context in which to understand such perspectives because critical thinking has been noted to be important, relevant and highly applicable to the English Language teaching context (Halvorsen, 2005). Language development and critical thinking are closely related and so language learning lends itself well to the teaching of critical thinking (Shirkhani & Fahim, 2011). There is empirical evidence supporting the effectiveness of teaching critical thinking skills along with language (Chapple & Curtis, 2000). For example, in the area of spoken communication and planning for writing, critical thinking requires active and interactive learning where new inputs and opinions need to be analysed and understood before being internalised. In the South American and Eastern European contexts especially, students are encouraged to apply critical thinking when comparing their views and ideas, when evaluating arguments, when probing into the intellectual standards of clarity and accuracy, breadth and width, relevance and fair-mindedness (Vdovina & Gaibisso, 2013). In this way, they tend to learn better by actively communicating with each other as they engage over issues.

In addition, reading comprehension requires the use of critical thinking. Broek and Kremer (2000) made connections between inference-making and critical thinking in the development of reading comprehension. They presented the idea that inferential and reasoning skills are closely related to other reader characteristics and skills that affect text comprehension. Such reader characteristics include word recognition, and semantic and syntactic awareness.

In Singapore, English Language teaching allows for the quite seamless development and application of critical thinking while teaching about language areas. A study into teachers' perspectives on the teaching of critical thinking and their practices can be more readily explored in the English Language subject discipline.

Research questions

This study centred on understanding the teachers' views and practices as they worked towards developing critical thinking in their students in the secondary school English Language classroom in a school in Singapore.

For the purposes of this study, two research questions were addressed, namely,

- 1) What are teachers' perspectives regarding the teaching of critical thinking in English Language lessons?
- 2) What are the teachers' practices for teaching critical thinking in English Language lessons?

Methodology

An embedded multiple case study methodology was adopted for the purposes of this study. The perspectives were examined through interview data from three teachers as well as classroom observations of their English Language lessons when the teachers attempted to incorporate critical thinking into their lessons. A follow-up interview after the lesson observation was also done to seek clarifications and to get further insights on the teachers' perspectives following the teachers' reflections on their lessons.

In this study, an understanding of different teachers' perspectives of critical thinking was constructed. Such perspectives develop over the years of social interaction with the influences in their lives (their educational and training backgrounds, their years of actual teaching practice, their home environments, peer influences, and the media).

Research Design

Researchers, using qualitative methods, analyse how people learn about and make sense of themselves and those around them (B. L. Berg & Lune, 2012), and it is argued that the data from qualitative research can provide rich insights into human behaviour (Guba & Lincoln, 1994).

In connection with this particular study, in order to understand the teachers' perspectives regarding the teaching of critical thinking, data from multiple sources of evidence such as interviews (pre- and post-observation), and observations were triangulated. With the accumulation of many perspectives, triangulation provides richer and more complex pictures of the phenomenon being studied (Mathison, 1988), and, through a process of meaning construction, could result in increasing the validity of the results. However, convergent, inconsistent, and contradictory evidence must also be rendered reasonable by the researcher (Herrlitz & Sturm, 1991; Mathison, 1988).

During the post-lesson observation interview, clarification questions on the lessons and the teaching observed and the overall impression of the student responses were asked to have a sense of any issues, tensions, problems or learning points that the teachers might have had while teaching and developing critical thinking in their English Language lessons.

In essence, the data sources included:

- 1) Personal interviews with the teachers
- 2) Lesson observation notes
- 3) Post-lesson observation interviews

Sample and subjects

The teachers were chosen as participants of the interview through purposeful sampling from one secondary school in Singapore. These teachers had tried to incorporate critical thinking into various lessons on writing, reading comprehension, and speaking. The key motivation for their selection was to develop an understanding of the teaching practices across the streams in the Upper Secondary levels (i.e. Express, Normal Academic and Normal Technical). These Upper Secondary teachers were also chosen as the Secondary 3, 4 and 5 English Language curriculum in the school focused a lot more on argumentative and expository writing, mini-debates on topics, higher-order comprehension questions, and in-depth analyses of issues. In Singapore, secondary school students are streamed into three general levels, E (Express) is the high ability stream, N (Normal Academic) is the mid-ability stream and T (Normal Technical) is the low ability stream. The numbers (Secondary 3, 4 and 5) indicate year of study.

Differences in the years of teaching experience in the school and in the years in teaching critical thinking were expected to provide further insights into the teachers' perspectives. They came from different educational landscapes and so their expectations, assumptions and practices about critical thinking were different.

Table 2 shows the profiles of the three teachers illustrating their backgrounds and differences.

Table 2

Case Study Subjects

Teacher	Age	Subjects taught	Years teaching	Level taught	Years in teaching critical thinking within EL curriculum
T1	54	English/ Literature/Drama	30	Sec 4N/5N	22
T2	29	English/ Literature	7	Sec 4T	6
T3	37	English	14	Sec 3E	14

Use of semi-structured interviews for the study

The interviews with the teachers provided rich data from which it was possible to ascertain the degree to which they had views on the teaching of critical thinking and to learn more about how their practices had been devised. The interviews were chosen as a method of gathering a collection of more personal, interactive data (Mertens, 1998).

The interviews were semi-structured in that, although there were guiding questions, the leads raised by participants were followed and other directions were taken (Hatch, 2002). Such interviews are in-depth as they are designed to go deeply into the understandings of the participants (Hatch, 2002). A flexible structure to the interviews takes into account the fact that something unexpected can be revealed. Sometimes, the best interviews come from a comment, a story, an artefact, or a phrase an interviewer may not have expected (Chiseri-Strater & Sunstein, 1997). It is therefore equally vital to follow the participant's lead, despite there being a list of guiding questions. For the interview proper, each of the three teacher participants was interviewed for up to an hour.

Data collection and analytic procedures

Content analysis is a careful, detailed, systematic examination and the interpretation of a particular body of material in an effort to identify patterns, themes, biases and meanings (B. L. Berg & Lune, 2012; K. E. Berg & Latin, 2008; Leedy & Ormrod, 2004; Neuendorf, 2002). The analysis is designed to "code" the content as data that serves to address the research questions in the study (B. L. Berg & Lune, 2012).

The interview responses from the participants central to the issue under investigation can be transcribed into data. This data is then organised or reduced to find patterns of human activity, behaviour and thinking (B. L. Berg & Lune, 2012). Elements of inductive reasoning are used in the analysis. Besides the transcribed data, additional latent meanings and themes that are plausible are looked into, while adhering to the words and points personally voiced by the participants.

To further the whole process of analytic activities, the following steps outlined by B. L. Berg and Lune (2012) were adopted after the interview data was transcribed.

- a) Codes were analytically developed and inductively identified from the data and affixed to pages in the transcripts.
- b) Codes were transformed into categorical labels or themes.
- c) Materials were sorted by these categories, identifying similar phrases, patterns, relationships, and commonalities or disparities.

- d) Sorted materials were examined to isolate meaningful patterns and processes.
- e) Identified patterns were considered in light of previous research and theories, and a set of generalisations was established.

Ethical considerations

Ethical considerations need to be taken into account when responses from teachers are gathered, analysed and included for a published report. Hammersley and Atkinson (1995) have described five ethical issues that need to be considered and these include informed consent, privacy, harm, exploitation and consequences for future research.

Firstly, with regard to the issue of informed consent, the teachers were given an opportunity to decline to be interviewed after it was made clear what the research was about. There was care in the matter of divulging information which might affect people's behaviour in ways that may invalidate the research (Hammersley & Atkinson, 1995). Care was also taken that participants were not led in a certain direction that was deemed favourable or biased in the study.

Secondly, the issue of privacy is particularly important here. By asking for teachers' perspectives on critical thinking and finding out about their teaching practices in the area, their thinking and the actions based on that thinking were looked into. In order to increase the likelihood of getting the real beliefs of the teachers, there was a need to assure the teachers that their identities would be concealed.

Thirdly, it is important that harm was not done to the participants. The research study has a direct link to the MOE's desired outcomes of education and the publication of 'unsatisfactory' data recorded from the interviews and gleaned from the surveys might bring about a response from friends, colleagues, parents and students. Since the research process may also have wider ramifications, beyond immediate effects on the people actually studied, there must be careful consideration of the likely effects on people indirectly involved (Hammersley & Atkinson, 1995).

Fourthly, it is important that the participants also feel that they have gained something from the experience and do not feel exploited. It is hoped that the researcher's sharing of their teaching practices and perspectives is useful for discussion in their professional learning teams as they continue to grow as teachers and learn more about the development of critical thinking. While some may argue that this could lead to criticism of their perspectives, the culture of professional learning teams encourages shared learning towards improving the practices of the team as a whole. Therefore, the perspectives are welcomed.

Lastly, with regard to the consequences for future research, as pointed out by Hammersley & Atkinson (1995), there should be no conflicting interpretations and clashes of interest that lead to the participants' refusal of access to researchers in the future. The participants must see the research as equally important to them in their professional growth as educators.

Results and Discussion

In this section, a within and cross-case analysis of the three teachers is provided. A within-case analysis is given for *Teacher 1's* perspectives and her teaching practices first.

Teacher 1 is the most experienced English Language teacher among the three teachers, with thirty years of practical teaching experience. However, she claimed that she was not familiar with any critical thinking terms and had not been trained in critical thinking. While she had been trained in lateral thinking and metacognition, she claimed she was confused as to whether this was associated with

critical thinking. It is likely that she had not gained much theoretical understanding of the features of critical thinking nor read about its cognitive and dispositional aspects. However, she intuitively included steps for students to analyse questions and make problem solving explicit but claimed she did not know whether she taught critical thinking. This was confirmed when she conducted her narrative comprehension lesson with the 5N students. For example, in answering the inference questions in comprehension, she highlighted that certain steps were needed. She asked the students to follow the steps of referring to the key words and requirements of the question, looking for evidence to address the questions and then explaining why their responses were accurate. Her use of deductive reasoning and the recognising of fallacies were two distinct elements taught in that section of the lesson. *Teacher 1* allowed the rest of the class to evaluate the responses made by the students who were first asked to follow the steps in answering the inference questions. Thus, she also explored the features of critical thinking in which relevance was determined and missing information and ambiguity identified. *Teacher 1* had pushed for responses with complete details in certain cases where responses had been vague or lacked details. In the follow-up interview, she observed that she had 'got them thinking' and her students were trying to make connections to make sense of what was discussed. She felt that she could have provided more schemata and contextual information that could have been activated during the classroom discussion but more time was needed for planning such lessons in order for rich critical thinking to be observed in class. This suggested that for critical thinking to occur, she believed that prior knowledge was needed for her students.

From these observations and from what was concluded from the interviews with *Teacher 1*, it was evident that her intuitive notion based on her interactions over the years with her own teachers and her peers allowed for a methodical step-by-step process in problem analysis and solution. She had not explored the English Language syllabus (Ministry of Education, 2008) much to tease out the elements of critical thinking that she could use in her lessons but proposed that, for her to learn more about critical thinking, there needed to be more discussions about what critical thinking meant. This could then be translated better into the nature of lessons to be conducted. She also believed that better buy-in of critical thinking among teachers was needed and there could be greater standardisation of pedagogy and materials for the teaching of critical thinking. Lastly, she advocated the organisation of more sharing sessions on standards (which was reiterated in both her first and follow-up interviews) so that there could be more consistency in how to actualise the teaching of critical thinking elements in class especially when time was a factor. Workshops and seminars could also be conducted to target the methods in which the teaching of critical thinking could be done.

Next, *Teacher 2's* perspectives and teaching practices for critical thinking are addressed. *Teacher 2* had the fewest years of teaching experience among the three teachers. She demonstrated innovative strategies in the classroom and was willing to try new ideas. She had attended a two-hour workshop on critical thinking but not on how to teach it. She was aware of the domains essential to being a critical thinker but not on how to deliver targeted critical thinking lessons in the English Language classroom. In her understanding of critical thinking, she believed there was the need to gather and evaluate contextual evidence to come up with an objective analysis for a reasoned conclusion. She believed in the need for students to also develop their responses with nuanced arguments through a classroom discussion whether it was a writing, comprehension or oral communication lesson. For example, in narrative comprehension, she analysed the writer's perspective, tone of voice and language use, and inference questions based on contextual clues to help the students to answer. For the factual comprehension, she mentioned the need to analyse the arguments made, any bias, the flaws in reasoning, the writer's perspectives and the organisation of arguments. For essay writing and spoken interaction, besides what has already been mentioned for comprehension above, there was a need for students to analyse different perspectives, counter-arguments and rebuttals. They could

question the viewpoints provided by their peers and reach a consensus through a classroom discussion with the teacher as a 'fly on the wall'.

In the follow-up interview to her lesson, she reported that she had not consciously taught critical thinking in her visual text and narrative comprehension lesson. In a step-by-step process of deductive thinking, she had asked certain students to find the main message (or essential idea) of specific paragraphs. Certain sentences had been identified and evaluated to arrive at a conclusive main message. In accordance with what she had mentioned in her first interview, in order to determine the accuracy of presented information (another aspect of critical thinking), she had highlighted the need to link answers to the question and to text in the passage. Just as *Teacher 1* had done in her lesson, *Teacher 2* had looked at identifying missing information and ambiguity. For example, she had pointed out how certain words that had not included the context could have affected responses. In addressing ambiguity, *Teacher 2* had discussed specificity in answers with regard to the choice of words as in the case when she had asked 'What do you mean by "senior citizens"?' In the course of the lesson and in the follow-up interview, she believed that 'students were more skilled in question analysis and deriving answers from contextual clues' but she felt that 'there was not enough time allocated for them to think through, discuss and come to their own conclusions'. She thus felt that she could 'incorporate more group discussions in future lessons and have targeted lessons that hone the students' critical thinking skills'.

There were some other issues raised by *Teacher 2* with regard to the teaching of critical thinking. She believed that critical thinking was easier for higher-ability students to grasp, but it was difficult to teach. She argued that students 'need a more mature thinking and reasoning process'. However, such a process could take up more time and could have affected other learning objectives. In order to help her students, she constantly referred to the English Language syllabus (Ministry of Education, 2008) and guide to the teaching of the syllabus (Ministry of Education, 2009) to glean the learning objectives and the accompanying practices linked to each learning objective which 'might be useful'. She outlined what could be improved further in critical thinking instruction in her school, such as the inclusion of more short practices, group work, and a 'three-part workshop on comprehension, oral and writing'. Interestingly, she mentioned that professional development in critical thinking could also be done for the teachers in the Humanities Department so that they could also teach critical thinking better.

Lastly, *Teacher 3's* perspectives and teaching practices on critical thinking are addressed. Before *Teacher 3* came to the current school, she had attended training sessions on Socratic Questioning, which explores 'questioning techniques that focus on critical thinking'. She believed that a lot of the development of critical thinking was in the hands of the students themselves rather than the teachers, who helped to 'facilitate the development of critical thinking' and 'play[ed] the role of facilitator and guide[d] the students' through the critical thinking process by asking "probing questions". As a result, she believed in scaffolding the critical thinking process regarding the ways in which answers are usually derived for a topic or a question.

She further highlighted that a student who kept questioning herself on the different aspects of the topic and consciously and habitually provided alternative answers to any questions could be someone who was engaged in critical thinking. Unlike the other two teachers in this study, she included dispositional elements in her understanding of critical thinking development, repeatedly using words and phrases such as 'habits', 'self-evaluate' and 'discovering and learning on their own'. The other two teachers mainly addressed the cognitive elements for critical thinking as key from their perspectives and in their lessons.

According to what she mentioned in her interviews regarding classroom tasks and practices, *Teacher 3* preferred students to engage in class discussion and not allow themselves to accept any answers given to them. They constantly tried to 'improve on the prescribed answers'. She believed that students needed to have this habit of 'questioning everything they read or are given' and to 'question the circumstances and assumptions in deriving the answers.'

Teacher 3 suggested that critical thinking was inherent in writing, comprehension tasks and spoken interaction practices. For example, in situational writing, students were required to critically analyse some information, make some decisions and justify their choices. Such evaluating skills were part of the critical thinking process. In visual text and reading comprehension, she asserted that students were often given questions that required them to critically examine the text and respond to questions where inferences had to be made. Students were often asked to compare or evaluate certain features of the text and asked what conclusions could be drawn. Lastly, for the spoken interaction component, she believed that students needed to provide evidence and supporting details to consolidate their points of view. They needed to use logical reasoning to come up with certain conclusions and opinions about a subject matter. In addition, counter arguments and rebuttals were some facets of the discussion question that she wanted to teach proactively as part of the critical thinking process. She advocated again the 'habit' of doing this in regular conversations 'inside and outside' the classroom. In essence, she again reiterated the ownership of critical thinking development as well as the necessary dispositional elements of critical thinking were in the hands of students.

In her lesson on spoken interaction, she had asked the students to come up with questions for a spoken interaction practice based on a picture. Following that, they had been required to answer the questions in a detailed manner following the assessment requirements.

Initially, *Teacher 3* used guiding questions to get students to demonstrate their thought processes, and, in so doing, fulfilled her role as a facilitator while getting her students to deliberate, respond and evaluate what they had answered. However, she also reflected after her lesson that she was too eager to help them and there could have been more opportunities for students to develop the critical thinking process. In addition, she reflected that the guiding questions could have been phrased to help the students through the thought process. In her lesson, there was a focus on identifying points of view, facts and opinion. While this was done, the students were asked to recognise assumptions and determine the accuracy and relevance of presented information. In answering the spoken interaction questions, students were asked to evaluate their friends' responses by asking them to detect strengths and inconsistencies in their arguments.

In the entire process and during the post-lesson interview, she felt that her students were generally not used to thinking critically and deriving answers for themselves. It was also observed that the students needed contextual and prior information to formulate their critical thinking better. She asserted that critical thinking could 'reap better rewards than the conventional chalk-and-talk methods'. However, it required a lot of step-by-step guidance and a lot of time for critical thinking activities to be successfully carried out. *Teacher 3* was thus concerned about the balance a teacher might need to achieve to ensure the conclusion of the unit plans and learning objectives, while incorporating more critical thinking activities into a schedule where time constraints persisted.

Moving ahead, *Teacher 3* wanted to improve her classroom management techniques as she believed classroom discussions needed to be systematic to avoid 'messiness'. She saw a possible issue in that a lesson 'could descend into chaos' and meaningful discussions, probing questions and opportunities to critically reflect on and evaluate responses may be negated. To further improve teaching processes, she believed that there should be more stringent standards and greater consistency in the way in

which critical thinking was taught and that there should be more formative and alternative assessments that engaged the students in and encouraged more critical thinking. She believed that rote learning and the emphasis on exam management skills were taking precedence over the development of critical thinking. In addition, she advocated a reduction in the number of topics to allow for critical thinking and in-depth learning to be explored. Just like the other two teacher participants, she believed in having more professional development workshops to teach critical thinking as she herself had benefitted from the workshops that she had attended, such as Socratic Questioning. As well as the short practices also advocated by *Teacher 2*, she looked forward to the reduction of summative assessments in favour of more critical thinking projects.

Having addressed the within-case analyses of the three teachers, it may be useful to present a cross-case analysis of the three cases. Five themes were identified for the purposes of the analysis. Some commonalities and differences are discussed in this section.

The five themes are:

- a) Teacher knowledge of critical thinking
- b) The teaching of critical thinking
- c) The role of the teacher
- d) Student learning
- e) A key constraint and some possibilities

Teacher knowledge of critical thinking

It was generally found that *Teacher 3* perhaps had a greater understanding of the various domains of critical thinking including the dispositional elements than the other teachers. Both *Teacher 1* and *Teacher 2* seemed to highlight and demonstrate cognitive elements without any reference to dispositional elements in their interviews and lessons. While *Teacher 1* suggested that she knew very little about critical thinking, she intuitively demonstrated certain elements of cognitive critical thinking such as deductive reasoning, presenting accurate information, and identifying ambiguity. This perhaps suggested some understanding of key cognitive aspects of critical thinking. This could have been developed in part through the necessity of using these skills in comprehension question requirements as was evident in the lesson.

Teacher 2 and *Teacher 3* were able to provide examples of the different features of critical thinking in relation to the English Language subject discipline, and were able to highlight what areas of language learning necessitated the teaching of which elements of critical thinking. For example, the elaboration of a point or argument made and the finding of inconsistencies in arguments were aspects that they looked at in the development of writing.

The teaching of critical thinking

All three teachers advocated a form of step-by-step instruction in teaching critical thinking. For example, the use of guiding questions and a certain order to follow in answering comprehension questions were techniques mentioned and used in teaching critical thinking. All three teachers proposed the idea that utilising prior and contextual knowledge was necessary for the development of critical thinking, in that students needed a basis on which to build their arguments and provide consistent, relevant and supported information.

Regardless of the streams, classes or areas of language learning the teachers were teaching, the teachers were comfortable teaching the same cognitive elements as each other. They may or may not have tried others because only one lesson of each teacher was observed but it suggests that perhaps

the teachers could look at other cognitive elements of critical thinking and how these could be addressed in their English Language lessons.

In the area of dispositional elements of critical thinking, *Teacher 3* mentioned some aspects of it but these elements were not readily observed in her lesson. Perhaps these were not addressed as she had felt that 'the students were not ready for critical thinking', implying that the students had not yet developed the required dispositions. The following dispositional elements were not mentioned or observed in the interviews and lessons for all three teachers:

- inquisitiveness
- open-mindedness
- self-confidence
- truth-seeking

The only aspect covered involved having the students ask themselves questions and question their own assumptions.

Only *Teacher 3* highlighted the need for routines and structures in the teaching of critical thinking while the other two teachers saw that critical thinking could be developed when and where the question or topic allowed for it. A systematic process was advocated by *Teacher 3* in both pedagogy and in the area of assessment, and she believed that there could be formative and alternative assessment to ensure the development of critical thinking.

Role of Teacher

There seemed to be common ground for two teachers on the need for them to adopt some form of a facilitator role. It was more pronounced with regard to *Teacher 3*, while a reference to classroom discourse and the teacher as an observer ('a fly on the wall') was mentioned by *Teacher 2*. The common view was that the teacher was also asked to suspend judgement or solutions to problems raised and allow the students to deliberate before arriving at the answers. Probing questions were also a feature raised by all three teachers. However, *Teacher 1* preferred a more dominant role and was in favour of getting students to provide steps for arriving at answers and requiring them to develop their answers, inherently providing judgements that their answers could be improved without getting others to evaluate their responses. Thus, the facilitator role in teaching critical thinking by *Teacher 1* is, at best, piecemeal with the learning objective being much more language learning related.

Student learning

It was observed that students seemed comfortable doing group work in the lessons that were observed. It was pointed out by the teachers that for the more prepared and outspoken classes, critical thinking could be more easily taught as the students were more accustomed to providing logical reasoning or identifying flaws and ambiguity for the points and arguments raised. However, it was also pointed out that students who were more communicative were also more visibly thinking critically. It was not easy for teachers to ascertain whether students were being critical thinkers when there was little observable evidence of this taking place.

Crucially, *Teacher 2*, who taught a Normal Technical class, felt that critical thinking could be 'more suited for higher-ability students'. She felt that her students may lack the contextual and prior knowledge to build on their responses for higher-order questions or questions that required students to challenge assumptions or find ambiguity in arguments.

A Key constraint and some possibilities

From the interviews and lesson observations, a key constraint was commonly agreed upon as the teachers incorporated critical thinking into their English Language lessons. This constraint was the issue of time. Since the lessons needed to include critical thinking discourse, and as students took time to evaluate responses from their peers, teachers needed to balance the attainment of language learning targets and the development of critical thinking. There also needed to be more practice in using critical thinking in lessons to help students become better critical thinkers. Thus, properly structured lessons that helped to address both sets of targets needed to be developed. Better planning of lessons to take into account the time needed for effective critical thinking practice must be done.

Going forward, some possibilities have been suggested. Professional development workshops and seminars can be conducted to ensure proper standards and understandings about the teaching of critical thinking. While the literature has not pointedly presented a universal definition of critical thinking, it is hoped that the definition presented earlier in this paper based on the analysis of the literature could provide some headway for teachers to start critical thinking workshops. Cognitive and dispositional elements of critical thinking need to be explained and taught to the teachers for them to cascade in their teaching packages. This could also be done with teachers from other departments as mentioned by *Teacher 2*. This may help teachers to be more consistent and better grounded in theory in their instruction of critical thinking elements in their lessons. To make critical thinking more pervasive and more established as a formalised feature of English Language lessons (and so not piecemeal), formative and alternative assessments could include a greater percentage on critical thinking. *Teacher 3's* proposal on enabling students to take ownership of their own critical thinking could be explored as well so that critical thinking can go beyond just their English Language lessons. This helps students to develop a strong inclination for thinking critically which can be helpful when they enter the workforce.

Conclusion

The study examined the three English Language teachers' perspectives about the teaching of critical thinking, and their consequent teaching practices. While these perspectives were only from three teachers teaching three different streams, they provided some understanding of what teachers think about and execute in the classroom. In addition, the English Language syllabus (Ministry of Education, 2008) materials could be examined more by the teachers to look into guides and tasks on the development of critical thinking. A larger study involving more teachers across schools could be explored to develop greater insights into their perspectives and practices.

An important consideration addressed in the study is how we could have teachers addressing both cognitive and dispositional features of critical thinking in their lessons. Some teachers may not be aware of the taxonomy of critical thinking elements let alone be able to teach them. Therefore, the development of standards and consistency of instruction through seminars, workshops, and professional dialogues must be in place for them to ensure proper delivery of instruction to their students.

In addition, the dynamics of teacher-student interaction and teachers' new roles must be something looked at when critical thinking discourse and questioning take place. As mentioned earlier, teachers should take on the role of a facilitator with students taking ownership of their own critical thinking process.

Lastly, while the constraint of time remains an issue, the implementation of a more systematic structure in the preparation of the scheme of work and unit plans could help in balancing the need to attain subject discipline learning competencies and critical thinking competencies. Established routines in lessons could be put in place to ensure that the process of critical thinking is adhered to and is not piecemeal.

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