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Incorporating Critical Thinking: Teaching Strategies in an English Language Programme

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ABSTRACT

Critical thinking plays a vital role in enhancing the quality of students and education all over the world. Thus, educators need to be able to provide a critical thinking and learning environment in the classroom. This research centres on the critical thinking application in the classroom for the English Language programme in the Academy of Language Studies (ALS) UiTM Shah Alam – English for Professional Communication (LG240). This study aims to investigate how English lecturers and students in the ALS perceive their critical thinking application in class. Additionally, the study investigates if there is a significant difference between the perception of these two groups regarding critical thinking application in the classroom. The study adapts a framework that focusses on seven dimensions of critical thinking: analysing, applying standards, discriminating, information seeking, logical reasoning, predicting and transforming knowledge. The findings reveal that there was only one dimension that showed a significant difference between the lecturers and the students' perception of critical thinking application in the classroom, that is, 'transforming knowledge'. From this study, it can be generally concluded that both lecturers and students in the ALS share the same perception of the application of critical thinking in their classroom.

Keywords: Critical thinking, lecturer's perception, students' perception, seven dimensions of critical thinking

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INTRODUCTION

Critical thinking has long been firmly rooted as a special ability of mankind, promoted fervently by the Greek philosophers like Socrates, Plato and Aristotle since 350

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BC. Termed reflective thought by Dewey (1910), it involves dynamic, tireless and watchful thought of any "belief or supposed form of knowledge" as well as the intended conclusion, a part of which echoes the essentials of meaningful thinking that separate a thinking man from another supposedly thinking man. Critical thinking offers thinkers multiple options before arriving at a decision, a process claimed to be "complicated" (Özkan-Akan, 2003) which needs an educator-student continuous pursuit of discovery, seen therefore as "an aspiration", rather than a skill (Brown & Freeman, as cited in McCrae, 2011). Looking at the many crucial elements involved in critical thinking, there is no doubt that this skill should be promoted in classrooms to develop critical thinkers among tertiary students.

Definition of Critical Thinking

The centuries-long discussion of critical thinking has yielded an amalgamation of definitions for this activity, with Socrates' emphasis on the vitality of having disciplined questioning, developing new perspectives, revealing biases and distortion in thought (as cited in Paul & Elder, 2014) being the foundation on which the terms critical thinking and reflective thought are laid today. Lau (2011) proposed that critical thinking was the act of considering "obviously and soundly," an activity that is done "unequivocally and deliberately… taking after the tenets of rationale and logical thinking, in addition to other things". He further emphasised that creative thinking was equally important as critical thinking when searching for possible solutions to problems. Cottrell (2011) defined critical thinking as "a complex process of deliberation" that involved among other skills, the ability to recognise "other individuals' positions, contentions and conclusions," assess "the proof for other perspectives" and fairly ponder "contradicting arguments and proof". Reiterating Ennis (1987), critical thinking, according to Cottrell (2011), permits constructive skepticism and doubt that can lead people to making better decisions.

In addition to the definitions above, critical thinking can also be defined as "the art of examining and assessing thinking with a view to enhancing it" (Paul & Elder, 2001), an art that they claimed can be learnt notwithstanding the rigorous mental practice and hard work it demands. Ennis (1996) simply defined critical thinking as thinking sensibly and brilliantly as to determine "what to accept or do" (p. 1), suggesting open-mindedness and mindfulness as the vital characteristics a critical thinker must possess. Sharing a similar view, Tittle (n. d.) defined it as the "judicious reasoning about what to believe, and therefore, what to do", assuming that people act according to their beliefs.

Seven Dimensions of Critical Thinking

The dimensions of critical thinking originally developed by Scheffer and Rubenfeld (2000) list 17 dimensions of critical thinking, focussing on the nursing field. This paper, however, adapts only

seven of the 17 dimensions with the English classroom as the focus of the study. Table 1 lists the seven dimensions and describes each.

Table 1
Adaptation of Scheffer and Rubenfeld's 17 dimensions of critical thinking in nursing (2000)

Dimensions	Description
Analysing	Isolating or breaking an entire whole into parts to discover their nature, function, and connections
Applying standards	Judging as indicated by established individual, expert or social rules or criteria
Discriminating	Perceiving contrasts and similarities among things or circumstances and recognising precisely as to categorise or rank
Information seeking	Searching for proof, truths or information by recognising important sources and assembling objectives
Logical reasoning	Drawing inferences or conclusions that are bolstered or legitimised by evidence
Predicting	Imagining a plan and its outcomes
Transforming knowledge	Changing or concerting the condition, nature or form or function of concepts among contexts

Incorporating Critical Thinking in Teaching - The Reasons

Mahyuddin, Pihie, Elias, and Konting (2004) referred to demonstrating thinking capacities unequivocally as a subject by itself that educators and instructive project coordinators should consider. As stated by Ten Dam and Volman (2004), direction improves the reasoning skill of students. Courses concentrating on thought coordination, crosswise over controls and an interdisciplinary approach are probably going to enhance students' critical thinking. Matnor (as cited in Nagappan, 2012), highlighted that instructors needed to show thinking aptitude to shape students into becoming deduction pioneers. Sternberg (2003) conceded that instructive organisations ought to concentrate on urging students to think critically and brilliantly. With easy access to information in this age of the Internet, students who have not received instruction on how to think critically can be deluded or confused by the volume of information available in cyberspace on any one subject.

Kennedy (1991) discovered that thinking and reasoning were not effectively learnt by students. For subjects like Mathematics that deals with numbers and calculation, they may process well, but they experience issues when it comes to understanding more unpredictable numerical operations. They can utilise dialect well, but they get to be risky to protect their perspectives. Thomas (1999) imagined that most schools and colleges were usually predictable as far as arrangement of exercises goes. The

exercises can be anticipated by the students and consequently, lessons become less exciting for them. However, when students cannot foresee what is to come, for example, in the next exercise or lesson, they would look forward to learning sessions with more concentration and consideration.

Teaching Strategies for Critical Thinking

Paul and Elder (2008, 2009; as cited in Kokkidou, 2013) outlined a few proposals to impart critical thinking in the classroom. Instructors can promote the critical thinking process in the classroom by showing students how to evaluate their speaking and listening, planning tests that can help students enhance their reasoning capacity, making coursework exclusively for the students, clarifying the key ideas of the course unequivocally during the beginning of the lesson, utilising class time for students to work on thinking within the context and helping undergraduates see all substance as an arrangement of interconnected thoughts.

Mahyuddin et al. (2004) proposed that reading comprehension ought to incorporate aptitude for, for example, drawing inferences, making predictions and checking one's own comprehension of the composed materials. In this regard, there ought to be more uses of assignments that request students to analyse more and portray less as this encourages critical thinking among learners. Additionally, giving input on individual students' written work can improve their basic aptitude for deduction (Shim & Walczak, 2012). Class presentations, dissemination of challenging questions and their consolation in applying ideas taught in the course also need to be encouraged by instructors to guarantee the effectiveness of the skill of critical thinking among students.

Educators can instil freedom of thought and confidence in their students. This is possible by having students think about their own thoughts and examine the issues and arrangements as opposed to having them talk about the ideas found in texts (Ten Dam & Volman, 2004). Ten Dam and Volman (2004) added that thinking should be included in lessons by allowing classroom associations. This can give students a chance to gain experience and aptitude for considering issues from different viewpoints and identifying the primary issues in an argument. From preparing lessons to giving students their homework, educators need to consider many factors in incorporating critical thinking in the classroom. Motivation and feedback also play a big role as these have an impact on students.

Preparation for the Educators

Educators who have definite information on critical thinking capacity and an appreciation of how to channel this into lessons should be aware that students can be trained to think critically and creatively. (Choy & Cheah, 2009). Educators should be exposed to high-level thinking skills, such as illuminating, examining, expressing opinion, making choices and solving and

arranging problems as well as to low-level thinking skills that do not require wide and significant thought (Mahyuddin et al., 2004). Cubukcu (2006) assumed that with the objective of encouraging the growth of thinking skills, future educators should endeavour to aid students in practising these essential thinking skills in each course they would be teaching.

Assaf (2009) concurred that teachers should be given sufficient time to be trained well to build up students' scholarly abilities. There ought to be an established programme catering for pre-benefit and in-administration educators to procure the practices and skills to upgrade students' performance and development. In correlation, while educator training programmes that train thinking ability do exist, it was discovered that educators who joined such programmes were most likely not going to use their insight in the classroom because of time constraints (Scott, Callahan, & Urquhart as cited in Slatter, 2009). Slatter also believed that preparation for instructors, while prescribed, will not necessarily lead to classroom practice of that preparation. In this way, instructors must prepare themselves before they can train students in higher-level thinking skills.

Barriers in Teaching Critical Thinking

In Malaysia, it is understood that numerous educators are not able to incorporate thinking ability in their teaching methodology (Mahyuddin et al., 2004). Nagappan (2012) believed that educators are not prepared to take this step in their classrooms. Hove (2011) found that instructors did attempt to confront the challenge of making an appropriate balance between test preparation and students' need to build creative and critical thinking skills. Another hindrance that must be confronted by educators is lack of time for providing guidelines as contact time with students is restricted. In addition to restricted time, educators must also deal with the many challenges and issues that can crop up in a face-to-face environment (Mandernach, 2006; Thomas, 1999).

In addition, because the face-to-face classroom environment is subject to the constraints of time for learning and applying critical thinking in class, examinations in the classroom have a tendency to be shallow (Cheong & Cheung, 2008). Mandernach (2006) added that a large number of instructors simply repeated the teaching methodology as they were taught it. Choy and Cheah (2009) agreed with this, stating that many instructors were not sure if their students could learn how to think critically by themselves. This was also noted by Louis, Febey and Schroeder (2005), who felt that many instructors struggled with complying with the many complex guidelines for testing students. Time and class management are the main components that keep instructors from venturing into critical thinking-based learning sessions and exercises. Moreover, some educators feel that their students are not prepared for higher order thinking skills, such as critical thinking.

MATERIALS AND METHODS

The objectives of this study were:

1. To investigate the ALS English lecturers' perception of their critical thinking application when teaching in class as far as analysing, applying standards, discriminating, information seeking, logical reasoning, predicting and transforming knowledge are concerned,
2. To determine the students' perception of the lecturers' critical thinking application in class in promoting the above skills, and
3. To investigate if there was any significant difference between lecturers' and students' perception of the application of critical thinking in the classroom.

The study involved 38 ALS lecturers and 110 ALS students and made use of the non-random purposive sampling method. The students were from Semesters 2, 3, 4 and 5 of the English for Professional Programme, UiTM. Only English lecturers who were teaching content courses were chosen. The instrument used for this study was an adapted version of a questionnaire by Sulaiman (2012) of which, only 38 items out of 58, deemed relevant to the context of this study, were selected and then grouped according to the chosen seven skills namely: analysing (Items 1-6), applying standards (Items 7-12), discriminating (Items 13-18), information seeking (Items 19-23), logical reasoning (Items 24-28), predicting (Items 29-33) and transforming knowledge (Items 34-38). There were two sections in the questionnaire. Section A elicited information on the respondents' demographic profile, while Section B gathered information on their perception of critical thinking application in the classroom based on the seven critical thinking skills. In this study, the questionnaire was divided into two sets – lecturer set and student set. The former recorded the lecturers' perception of their own teaching of the seven critical thinking skills (i.e. I ask students to analyse primary source texts), while the latter gathered data on how the students perceived the lecturers' teaching of the same skills (i.e. My lecturer asks students to analyse primary source texts). A pilot test indicated high reliability of the instrument (0.922) and a 5-point Likert scale ranging from 1 (never) to 5 (almost always) was used for the measurement of each item. The data obtained from the questionnaires were analysed using descriptive analysis and an independent samples t-test. For descriptive analysis, the mean and standard deviation were calculated while for the t-test, the means between the groups were compared.

RESULTS AND DISCUSSION

Demographics

There were a total of 38 lecturers who answered the first set of the questionnaire. Twenty-four (63.2%) of them had master's qualification while 14 (36.8%) had doctoral qualification. A total of 110 students answered the second set of the questionnaire.

Twelve (10.9%) were from Semester 2, 45 (40.9%) from Semester 3, 15 (13.6%) from Semester 4 and 38 (34.5%) were from Semester 5.

Lecturers' and Students' Perception of Critical Thinking Application in Class in Promoting the Skills of Analysing, Applying Standards, Discriminating, Information Seeking, Logical Reasoning, Predicting and Transforming Knowledge

Based on Table 2, both groups of respondents scored the highest for the same item on the lecturers' use of "questions that ask students to describe data shown to them orally or in written form." This could be associated with the fact that asking students to describe data shown to them is in itself a practice of attaining clarity for effective critical thinking, as clarity, Bassham, Irwin, Nardone and Wallace (2011), Cottrell (2011) and Ennis (1996)

Table 2
Analysing

Lecturers			Mean	Std. Deviation
I use questions that ask students to describe data shown to them orally or in written form.			4.1842	0.60873
I use writing assignment prompts for students to engage in textual analysis of literature.			3.3421	1.04691
Students				
My lecturer uses questions that ask students to describe data shown to them orally or in written form.			3.9273	0.68682
My lecturer uses in-class, creative projects involving a variety of materials.			3.2545	0.80636
Independent Sample T-Test				
	Position	Mean	Std. Deviation	t	df	Sig.
Analysing	Lecturers	3.7325	0.58962	0.697	146	0.487
	Students	3.6636	0.50075			

suggested, is one of the basic elements deemed vital in critical thinking. Clarity permits understanding; hence, it enables effective evaluation of an argument or claim (Bassham et al., 2011). According to Ennis (1991), a thinking disposition, when taken to the "sophisticated level" is elevated to "trying to be clear about the intended meaning and nuances of meaning in a developing discussion or argument." In addition to this, Cottrell (2011) reiterated the substance of clarity, stating that it came with internal and logical consistency. However, both groups of respondents differed in the lowest mean score items as lecturers perceived themselves as using less "writing assignment prompts for students to engage in textual analysis of literature," while the

students perceived less use of "creative projects involving a variety of materials." The average mean score among the lecturers was 3.73 (0.59) and 3.66 (0.50) among the students. An independent sample t-test run on the first skill "Analysing" showed there was no significant difference between these scores [t (146) = 0.697, p = 0.487].

Table 3
Applying standards

Lecturers			Mean		Std. Deviation
I ask students to validate their position with examples and evidence, both in verbal and written analysis.			4.0526		0.69544
I talk about [the] decision-making process during demonstrations.			3.5789		0.82631
Students					
My lecturer asks students to validate their position with examples and evidence, both in verbal and written analysis.			3.9455		0.78794
My lecturer encourages peer reviews in writing.			3.4091		0.97957
Independent Sample T-Test					
	Position	Mean	Std. Deviation	t	df	Sig.
Applying Standards	Lecturer	3.7719	0.62771	0.600	146	0.550
	Student	3.7000	0.64046			

Table 3 repeats the previous pattern, where the item with the highest mean score among the lecturers and students was for lecturers asking "students to validate their position with examples and evidence, both in verbal and written analysis." The high perception of the lecturers' role in encouraging students to support their arguments with valid evidence here can be well expected as critical thinking, according to Bassham et al. (2011), Cottrell (2011) and Ennis (1996), necessitates such validation, making it indispensable in the teaching of thinking skills. As validity of evidence liberates the line of reasoning from insubstantial and irrelevant elements, it thus positions immense strength on one's argument. The items that scored the lowest mean for both lecturers and students were, "I talk about [the] decision-making process during demonstrations" and "My lecturer encourages peer reviews in writing." The average mean score for the lecturers was 3.77 (0.63) and 3.70 (0.64) for the students. An independent sample t-test run on the second skill "Applying Standards" showed there was no significant difference between these scores [t (146) = 0.600, p = 0.550]

Table 4 shows that the item with the highest mean score among the lecturers and students, indicating that the lecturers and the students shared the same perception, was: "use questions that ask students to analyse materials by comparing between identifying similarities and differences, and summarising conclusion." Conducting

Table 4
Discriminating

Lecturer	Mean	Std. Deviation
I use questions that ask students to analyse materials by comparing between identifying similarities and differences, and summarising conclusion.	3.7105	0.80229
I use discussion of case studies in both large and small groups.	3.0789	1.19417
Student		
My lecturer uses questions that ask students to analyse materials by making comparison, identifying similarities and differences, and summarising conclusion.	3.6182	0.72923
My lecturer exposes students to new kinds of text (broadly interpreted to include musical, cinematic, visual, digital) from cultural contexts that differ [from] those of the students.	3.1909	0.95298

Independent Sample T-Test

	Position	Mean	Std. Deviation	t	df	Sig.
Discriminating	Lecturer	3.2982	0.82487	-1.311	48.510	0.196
	Student	3.4864	0.54236			

materials analysis is central to critical thinking training, as advocated by Bassham et al. (2011), Cottrell (2011), Elder and Paul (2010) and Ennis (1996) for building "depth", "precision" and "accuracy" in using critical thinking skills. The items that had the lowest mean score among both respondent groups were, " I use discussion of case studies in both large and small groups" and "My lecturer exposes students to new kinds of text (broadly interpreted to include musical, cinematic, visual, digital) from cultural contexts that differ [from] those of the students." The average mean score among the lecturers was 3.77 (0.63) and 3.49 (0.54) among the students, while the independent sample t-test conducted on the third skill "Discriminating" showed there was no significant difference between these scores [t (48.51) = -1.31, p = 0.196]

Based on Table 5, the item with the highest mean score among the lecturers was, "I ask open-ended questions," while for the students, it was, "My lecturer uses small group discussion with specific tasks assigned." The application of open-ended questions, with a high perception score among the lecturers in this study, promotes students' independence in responding to questions and issues. This can free the students from wishful thinking, bias and stereotypes while expressing their ideas and beliefs, as these, according to Bassham et al. (2011), are barriers to critical thinking. Both lecturers and students, nevertheless, shared the same perception when it came to the item asking about lecturers demonstrating "how approaches can vary and the value of searching multiple media and multiple examples." The score among both groups

Table 5
Information seeking

Lecturer			Mean		Std. Deviation
I ask open-ended questions.			4.1316		0.62259
I demonstrate how approaches can vary and the value of searching multiple media and multiple examples.			3.4211		0.91921
Student					
My lecturer uses small group discussion with specific tasks assigned.			4.0182		0.75397
My lecturer demonstrates how approaches can vary and the value of searching multiple media and multiple examples.			3.4091		0.91165
Independent Sample T-Test					
	Position	Mean	Std. Deviation	t	df	Sig.
Information Seeking	Lecturer	3.8789	0.44489	1.489	86.497	0.140
	Student	3.7418	0.59991			

for this item was the lowest. The average mean score among the lecturers was 3.88 (0.44), while among students it was 3.74 (0.60). The t-test conducted on the fourth skill, "Information Seeking", showed no significant difference between these scores [t (86.50) = 1.49, p = 0.140].

Table 6 reports that the lecturers and students shared the same perception when it came to the item: "use questions that ask students to reflect on their processes of decision-making during a project's development." The mean was the highest for this item among both groups. However,

Table 6
Logical reasoning

Lecturer			Mean		Std. Deviation
I use questions that ask students to reflect on their processes of decision-making during a project's development.			3.6053		0.78978
I ask students to observe phenomena, then form and test hypotheses on the phenomena.			2.7368		0.94966
Student					
My lecturer uses questions that ask students to reflect on their processes of decision-making during a project's development.			3.6182		0.75397
My lecturer asks students to form and test hypotheses about observed phenomena.			3.2545		0.92306
Independent Sample T-Test					
	Position	Mean	Std. Deviation	t	df	Sig.
Logical Reasoning	Lecturer	3.3105	0.67174	-1.289	0.146	0.199
	Student	3.4800	0.70760			

for the items that recorded the lowest mean score, the lecturers and the students seemed to think differently. The score among the lecturers for the item "to observe phenomena, then form and test hypotheses on the phenomena" was lower than the score among the students. The score was low among the latter, meanwhile, for the item, "My lecturer asks students to form and test hypotheses about observed phenomena." This can be compared with a study by Delaney, Johnson, Johnson and Teslan (2010) which they found that students wanted their instructors to deliver coherent and thorough lectures in order to maximise the use of instructional time and avoid using irrelevant materials. The average mean score for the lecturers was 3.31 (0.67) and 3.48 (0.71) for the students. The research found that there was no significant difference between these scores [t (146) = -1.29, p = 0.199] for the fifth skill, "Logical Reasoning".

Table 7
Predicting

Lecturer			Mean	Std. Deviation		
I use questions that ask students to apply what they have previously learned to new situations.			3.8684	0.77707		
I invite students to extract from what they have observed, to think about their ideas' implication, and to generate ideas across a range of specific contexts.			3.2632	0.89092		
Student						
My lecturer uses writing assignments with specific tasks or goals focusing on a particular kind of thinking or reflection.			3.7364	0.83146		
My lecturer invites students to extract from what they have observed, to think about their ideas' implication, and to generate ideas across a range of specific contexts.			3.4818	0.84302		
Independent Sample T-Test						
	Position	Mean	Std. Deviation	t	df	Sig.
Predicting	Lecturer	3.4842	0.72876	-1.248	0.146	0.214
	Student	3.6291	0.57395			

Table 7 shows that the lecturers and the students perceived the situation differently when it came to the items with the highest mean score for the skill, "Predicting". While the lecturers believed they were using "questions that ask students to apply what they have previously learned to new situations," the students, however, felt their lecturers used more "writing assignments with specific tasks or goals focusing on a particular kind of thinking or reflection." The item that recorded the lowest mean score among both the lecturers and students showed that both groups agreed that there was little invitation by lecturers for "students to extract from what

they have observed, to think about their ideas' implication, and to generate ideas across a range of specific contexts." This finding was similar to that by Shukla and Dungsungnoen (2016), who observed that teachers from higher institutions in Thailand were practising more knowledge- and application-based strategies.The average mean score among the lecturers was 3.48 (0.73) and 3.63 (0.57) for the students. Again, the independent sample t-test showed no significant difference between the scores [t (146) = -1.25, p = 0.214] for the sixth skill, "Predicting".

Table 8
Transforming knowledge

Lecturer						Mean	Std. Deviation
I use the process writing approach for major assignments where students receive feedback on drafts and parts of their projects.						3.6053	0.88652
I ask students to interpret scientific language in their own words.						2.7632	1.10121
Student							
My lecturer asks students to articulate an argument that would come from a point of view other than [the] students' own.						3.6636	0.82703
My lecturer asks students to interpret scientific language in their own words.						3.2727	1.05717
Independent Sample T-Test							
	Position	Mean	Std. Deviation	t	df	Sig.	
Transforming Knowledge	Lecturer	3.1368	0.72052	-2.725	146.007		
	Student	3.4855	0.66551				

Based on Table 8, the item with the highest mean score among the lecturers was, "I use the process writing approach for major assignments where students receive feedback on drafts and parts of their projects," at 3.61 (0.89), while among the students it was, "My lecturer asks students to articulate an argument, that would come from a point of view other than [the] students' own," at 3.66 (0.83). Both lecturers and students had the same perception of the item that recorded the lowest mean score when they were asked if the lecturers "ask students to interpret scientific language in their own words." The lower score for perception of knowledge transfer could be possibly associated with the fact that critical thinking, as proposed by Gelder (2005), is "vulnerable to the problem of transfer because critical thinking is generally intrinsically general in nature" (p. 43), with its application in a very wide range of fields. The average mean score among the lecturers was 3.14 (0.72) and 3.49 (0.67) among the students. Table 8 shows that there was a significant difference between these scores [t (146) = -2.73, p = 0.007] in the mean scores at the 0.05 level. This result tallied with studies by Horwitz (1989) and Willingham (2008), who both showed

that individuals with different sets of skills may perceive the application of critical thinking differently. Riekenberg (2010) also found that students thought highly of their instructors, especially when it came to teaching strategies and applications; this could explain why, generally, the students in this study perceived more strongly than the lecturers themselves that the lecturers were training them to transform knowledge.

CONCLUSION

From the descriptive analysis, the dimension that received the highest average mean score among the lecturers and students was "Information Seeking", recording 3.88 (0.44) and 3.74 (0.60), respectively. As mentioned by Scheffer and Rubenfeld (2000), information seeking can be identified as an activity that involves facts and knowledge searching by identifying sources that are relevant and gathering objectives. However, the dimensions that received the lowest average mean score for both lecturers and students were different. Among the lecturers, the lowest mean score was obtained for the "Transforming Knowledge" dimension at 3.14 (0.72). This might have been caused by the lecturers' inability to provide such tasks in the classroom. Louis et al. (2005) stated that many instructors struggled to meet testing guidelines for student tests. Mandernach (2006) added that most instructors tended to instruct the same way they had been taught, emphasising on teacher-based techniques that esteemed the procurement of substance over the learning procedure. Meanwhile, among the students, the dimension that received the lowest mean score was "Logical Reasoning", at 3.48 (0.71). This was probably due to lack of face-to-face time between the lecturers and students. Thomas (1999) felt that there was simply not enough time for educators to cover all the information they feel must be covered. Cheong and Cheung (2008) supported this statement, stating that restricted time in a face-to-face classroom environment prevented delving into critical thinking, leading to shallow discussions in the classroom.

From the independent samples t-test results, one dimension showed a significant difference between the perception of both lecturers and students. The dimension was "Transforming Knowledge" and the value was 0.007, which in the mean scores at the 0.05 level was considered significant. The average mean score for the lecturers was 3.14 (0.72), which was lower compared with the students' average mean score, which was 3.49 (0.67). In other words, the students thought that their lecturers did promote this dimension in the class while the lecturers felt that their approach did not promote it well. Horwitz (1989) mentioned that perceptions of a teacher were different compared with those of their students. Willingham (2008) agreed, saying that individuals with different information, experience and practice in reflective thinking could see critical thinking in unexpected ways. Therefore, the students thought highly of their lecturers' ability to promote this dimension of critical thinking in the classroom, but the lecturers did not

feel the same way. The lecturers felt that they had not performed the relevant strategies frequently enough in the classroom.

It can be concluded that both the lecturers and students of the Academy of Language Studies (ALS) in UiTM Shah Alam generally shared the same perception of application of critical thinking in the classroom.

REFERENCES

Assaf, M. A. (2009). *Teaching and thinking: A literature review of the teaching of thinking skills.* Retrieved January 13, 2017, from https://eric.ed.gov/?id=ED505029

Bassham, G., Irwin, W., Nardone, H., & Wallace, J. M. (2011). *Critical thinking: A student's introduction* (4th ed.). Singapore: McGraw-Hill.

Cheong, C. M., & Cheung, W. S. (2008). Online discussion and critical thinking skills: A case study in a Singapore secondary school. *Australasian Journal of Educational Technology, 24*(5), 556–573.

Choy, S. C., & Cheah, P. K. (2009). Teacher perceptions of critical thinking among students and its influence on higher education. *International Journal of teaching and learning in Higher Education, 20*(2), 198–206.

Cottrell, S. (2011). *Critical thinking skills: Developing effective analysis and argument*. New York, USA: Palgrave Macmillan.

Cubukcu, Z. (2006). Critical thinking dispositions of the Turkish teacher candidates. *Online Submission, 5*(4), 22–36.

Delaney, J., Johnson, A. N., Johnson, T. D., & Treslan, D. L. (2010). *Students' perceptions of effective teaching in higher education*. Retrieved January 13, 2017, from http://www.mun.ca/educ/faculty/mwatch/laura_treslan_SPETHE_Paper.pdf

Dewey, J. (1910). *How we think*. New York, USA: Dover Publications Inc. Retrieved August 3, 2016, from https//books. google.com.my

Elder, L., & Paul, R. (2010). Critical thinking: Competency standards essential for the cultivation of intellectual skills, Part 1. *Journal of Developmental Education, 34*(2), 38–39.

Ennis, R. H. (1991). Critical thinking: A streamlined conception. *Teaching Philosophy*, *14*(1), 5–25.

Ennis, R. H. (1996). *Critical thinking*. Upper Saddle River, USA: Prentice Hall.

Gelder, T. V. (2005). Teaching critical thinking: Some lessons from cognitive science. *College Teaching*, *53*(1), 41–48.

Horwitz, E. K. (1989). Facing the blackboard: Student perceptions of language learning and the language classroom. *ADFL Bulletin, 20*(3), 61–64.

Hove, G. (2011). *Developing critical thinking skills in the high school English classroom* (Doctoral dissertation), University of Wisconsin, Stout.

Kennedy, M. (1991). Policy issues in teacher education. *Phi Delta Kappan, 72*, 659–664.

Kokkidou, M. (2013). Critical thinking and school music education: Literature review, research findings, and perspectives. *Journal for Learning through the Arts: A Research Journal on Arts Integration in Schools and Communities, 9*(1), 1–14

Lau, J. Y. F. (2011). *An introduction to critical thinking and creativity: Think more, think better*. New Jersey, USA: John Wiley & Sons, Inc. Retrieved August 8, 2016, from https//books. google.com.my

Louis, K. S., Febey, K., & Schroeder, R. (2005). State-mandated accountability in high schools: Teachers' interpretations of a new era. *Educational Evaluation and Policy Analysis, 27*(2), 177–204.

Mahyuddin, R., Pihie, Z. A. L., Elias, H., & Konting, M. M. (2004). The incorporation of thinking skills in the school curriculum. *Kajian Malaysia, 22*(2), 23–33.

Mandernach, B. J. (2006). Thinking critically about critical thinking: Integrating online tools to promote critical thinking. *Insight: A Collection of Faculty Scholarship, 1*, 41–50.

McCrae, N. (2011). Nurturing critical thinking and academic freedom in the 21st century university. *International Journal of Teaching and Learning in Higher Education*, *23*(1), 128–134.

Nagappan, R. (2012). The teaching of higher-order thinking skills in Malaysia. *Journal of Southeast Asian Education, 2*(1), 42–65.

Özkan-Akan, Ş. (2003). *Teachers' perceptions of constraints on improving student thinking in high schools* (Doctoral dissertation), Middle East Technical University, Ankara, Turkey.

Paul, R., & Elder, L. (2001). *The miniature guide to critical thinking: Concepts & tools.* Tomales, USA: Foundation for Critical Thinking.

Paul, R., & Elder, L. (2014). *Critical thinking: Tools for taking charge of your professional and personal life*. New Jersey, USA: Pearson Education, Inc. Retrieved August 3, 2016, from https//books. google.com.my

Riekenberg, J. J. (2010). *The relationship between student perceptions of teachers and classrooms, teacher goal orientation toward teaching, and student ratings of teacher effectiveness* (Unpublished masters thesis), The University of Texas, Austin, USA.

Scheffer, B. K., & Rubenfeld, M. G. (2000). A consensus statement on critical thinking in nursing. *The Journal of Nursing Education, 39*(8), 352–359.

Shim, W. J., & Walczak, K. (2012).The impact of faculty teaching practices on the development of students' critical thinking skills. *International Journal of Teaching and Learning in Higher Education, 24*(1), 16–30.

Shukla, D., & Dungsungnoen, A. P. (2016). Student's perceived level and teachers' teaching strategies of higher order thinking skills: A study on higher educational institutions in Thailand. *Journal of Education and Practice, 7*(12), 211–219.

Slatter, C. J. (2009). *Teacher and student perceptions of critical and creative thinking within a science programme for high ability females in Singapore: Implications for classroom practice and staff development.* Retrieved January 13, 2017, from https://eric.ed.gov/?id=ED537604

Sternberg, R. J. (2003). *Wisdom, intelligence, and creativity synthesized*. Cambridge, England: Cambridge University Press.

Sulaiman, N. L. (2012). *Incorporating critical thinking: Teaching strategies in Malaysian Technical and Vocational Education (TVE) programs* (Doctoral dissertation), Colorado State University, Colorado, USA.

Ten Dam, G., & Volman, M. (2004). Critical thinking as a citizenship competence: Teaching strategies. *Learning and Instruction, 14*(4), 359–379.

Thomas, P. E. (1999). *Critical thinking instruction in selected greater Los Angeles area high schools* (Doctoral dissertation), Azusa Pacific University, Azusa, California, USA.

Tittle, P. (n. d.). *Critical thinking: An appeal to reason*. Retrieved August 8, 2016, from https//books. google.com.my

Willingham, D. T. (2008). Critical thinking: Why is it so hard to teach? *Art Education Policy Review, 109*(4), 21–32. doi: 10.3200/AEPR.109.4.21-32