

## **Incorporating Higher Order Thinking Skill (HOTS) Questions in ESL Classroom Contexts**

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### **ABSTRACT**

Malaysia is preparing to face 21st century learning challenges in order to fulfill the global needs. As a result, Higher-Order Thinking Skills (HOTS) have been introduced in the education system with the purpose to produce critical students who are able to compete at the international arena. Thus, this study investigated the question types used by teachers of English as a second language (ESL). Besides, this study also examined the challenges faced by the teachers in incorporating HOTS element in their teaching. The data for this study were gathered by means of class observations, interviews and questionnaires. The data collected by means of classroom observation and interviews were analysed thematically whilst the questionnaire data were analysed using descriptive statistic method. The findings of this study reveal that ESL teachers favour display questions or LOTS compared to referential questions, HOTS. This is due to lack of knowledge regarding HOTS questions and students' English low proficiency level. This study, therefore, recommends that ESL teachers are in need of adequate training on HOTS before they can successfully implement HOTS in language classrooms and further relevant studies should focus on the ways in which HOTS can be incorporated in ESL classrooms.

*Keywords:* HOTS, ESL, question types, language classrooms

### **INTRODUCTION**

Teachers use various question types as a means of measuring students' understanding as well as to ensure if the learning process of a particular subject has taken place (Kerry, 2002). Moreover, Kerry (2002) also stated that types of questions used in the classroom play a significant role in the process of teaching and learning as it affects students' achievement and also level of engagement. It is important for teachers to use the suitable question types in the classroom since students may give an appropriate or intellectual response if the questions asked are well constructed (Jariah Mohd Jan and Rosli Talif, 2005; Ribowo, 2006).

Effective questioning with incorporation of higher-order thinking skills (HOTS) is believed to be more helpful to develop students' level of critical thinking. Vijayaratnam (2012) indicates that critical thinking by which students can relate and actively respond to real-world demands is what we want. HOTS seems to be a crucial element in ESL classrooms because it stimulates students'

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critical thinking and according to Collins (1991), language arts achievement can be increased with the use of teaching strategies along with the implementation of thinking competencies. Having said that, Malaysia Education Development Plan (PPPM) 2013 to 2025 introduces the Higher Order Thinking Skills (HOTS) to be integrated in the school syllabus with the purpose to generate knowledgeable and critical students who are able to compete at the international arena. Nevertheless, there are on-going debates among researchers whether or not Malaysian teachers and students are ready for HOTS.

This paper thus aims to discuss the question types used by ESL teachers and challenges faced in incorporating HOTS in Malaysian contexts. The discussion will include the teachers' perceptions towards the applicability of HOTS questions in ESL classrooms.

## **QUESTION TYPES USED IN SECOND LANGUAGE CLASSROOMS**

Display and referential are two question types commonly used by ESL teachers. Display questions can be defined as questions by which the answers are already known whilst referential questions are known as open ended questions that focus on advices and opinion or questions that seek answer naturally as a means of stimulating interactions (Thompson, 1997; Thornbury, 1996; Long & Sato, 1983; Brock, 1986). Referential questions demand more thought and require students to generate a longer response and, most importantly, the teacher does not know the answer in advance (Brown, 2001). However, display questions are more dominant in ESL classrooms compared to referential questions since display questions are a quicker tool to assess students' understanding of the text contents (David, 2007; Boyd and Rubin, 2006).

Referential questions are used for more authentic communicative activities since they are likely to be encountered in the 'real world' (David, 2007; Nunan, 1987; Long and Sato, 1983) and it is believed that they could enhance students' speaking skills. Besides enhancing students' speaking skills, referential questions, which are classified as HOTS, can also help develop students' critical thinking, although it is noted that HOTS questions are claimed to only suit high-achievers (Brown, 2001; Zohar, *et al.*, 2001). Following this, it is not easy for ESL teachers to adopt referential questions in classroom, especially teachers in East Asia since students in this region typically prefer to listen passively rather than voice out their ideas openly (Liu & Littlewood, 1997).

Teachers' readiness to incorporate HOTS in their classrooms also plays a significant role. Given the fact that there are teachers who are not aware of the importance of developing students' critical thinking in their lessons, and as a result, they avoid employing higher-level questions. Furthermore, teachers find it difficult to incorporate HOTS in their classrooms and they are more comfortable with teacher-centred approach (Nagappan, 2001; Sparapani, 1998). Tan and Mohammad Yusof Arshad (2014), for instance, conducted a study on questioning technique in science classrooms, which used problem based learning approach, and the findings indicated that there are different types of questions used by teachers, which are higher-order, lower-order and eliciting ideas questions. They stated that teachers tend to use low order questions which are 53% compared to higher-order questions 20% and eliciting ideas questions 27% respectively. Thus, it clearly shows that Malaysian teachers tend to use lower order thinking questions rather than higher-order questions.

The variety of teachers' question types can result in active participation (Long & Sato 1983) and therefore preparing good questions is one of the important factors that could lead students to generate their own ideas, as well as, to help increase their confidence level and critical thinking (Effandi & Zanaton, 2007). According to Mehan (1978), turn exchanges that occur between teachers and students usually imply common acceptance and serious discussion. Sullivan and Lilburn (2004) listed three features for good questions as follows:

1. Questions that help students require more information rather than just remembering and reproducing them.
2. Questions that encourage students to learn by answering and expressing ideas while the teachers will learn from the input delivered by the students.
3. Questions that may have more than two answers.

## **THE IMPLEMENTATION OF HOTS IN MALAYSIA**

Higher-order thinking skills (HOTS) are known as the expanded of mind where the person must analyze or interpret the answer or to manipulate the information since the correct answer is not always gathered from the daily routine or knowledge (Onosko & Newman, 1994). The implementation of HOTS in classroom environment is believed to enable students to think critically through active learning. Teachers incorporating HOTS element in their teaching are expected to create interactive questions or classroom activities, by which students can actively respond to the questions or generate new ideas on the topic discussed. In HOTS classroom, students are no longer memorizing textbooks but are expected to explore and to develop their critical thinking by means of the tasks given of which they can relate to the real world situation (Krishnan and Yassin, 2009).

A project by the National Research Council, Committee on Research in Mathematics, Science, and Technology Education (1987) which involved some American schools shows that the implementation of HOTS in classrooms has an outstanding outcome towards the learning process. Students are found more capable to use their long term memory compared to students who are exposed to the lower order skill approach. The use of HOTS in classrooms will boost students' confidence level and lead them to be more critical, motivated and positive thinking in expressing and generating their ideas.

Even though Higher-Order Thinking Skills (HOTS) are the skills used in daily life, the skills are difficult to be applied in learning and teaching process. Heong *et al.* (2012) conducted a study on the needs analysis of Higher-Order Thinking Skills in generating ideas. The findings show that the academic staff believe that technical students faced difficulties in solving their individual assignment and also lack of knowledge in generating ideas. The reason for the incapacibilities to solve problems and generate ideas is lack of HOTS. It is therefore very crucial for the technical students to be equipped with HOTS.

Nagappan (2001) investigated the perceptions of ESL and Malay language teachers towards implementing HOTS in their classrooms. The findings show that the teachers are very much interested in the teaching of Malay or English language but not in the application of the higher-order thinking skills in their classroom. This obviously shows that some teachers are still lacking the

knowledge about HOTS, and this is identified as one of the challenges in implementing HOTS in schools. Similar to Tan and Mohammad Yusof Arshad (2014), Habsah Hussin's (2006) study on HOTS also found that teachers tend to use low level questions instead of high level question types. The result showed that three teachers seemed to favour one answer from one student for each question before moving on to the next question. This thus means that teachers do not expect other students to answer the same question and this obviously discourages students' participation.

Another study conducted on the implementation of HOTS in Malaysia was by Krishnan (2014). The study was conducted to investigate teachers' responses towards the idea of incorporating HOTS in School Based Assessment (SBA). It was found that the teachers are aware of the importance of HOTS in producing creative thinking society. The teachers stated that HOTS should be well prepared and organized in order to encourage them to accept the implementation of HOTS since it can improve students' critical thinking. Unlike Krishnan (2014) who studied on the teachers' perceptions, Ganapathy and Kaur (2014) investigated the ESL students' perception on the use of HOTS in English language writing class. The findings show that HOTS motivate the students' interest in writing critically and promote students' participation in the discussion with peers. Moreover, HOTS can be a platform for students to compare, discuss and generate their own ideas. Therefore, the implementation of HOTS could generate active learning and give positive impact to the teachers and students.

Studies on teachers' perceptions towards HOTS are still at its infancy, of which the previous studies focused more on students' feedback after the implementation of HOTS rather than teachers' point of view while integrating HOTS in their teaching. Therefore, this study is interested to investigate the question types used in ESL classrooms, teachers' perceptions and the challenges faced in the implementation of HOTS as a means of developing students' critical thinking.

## **RESEARCH METHODOLOGY**

The data collection methods for this study were class observations, interviews and questionnaires. Class observations were conducted to identify the types of question asked and the challenges faced by teachers in incorporating HOTS in ESL classrooms. Class observations on two lessons were video recorded and the length for each lesson was thirty to thirty-five minutes. Both lessons were on reading comprehension, using different reading texts based on the students' levels of proficiency.

The questionnaires, on the other hand, were to measure teachers' perceptions and beliefs in the ability of HOTS questions in developing students' critical thinking. There were three main sections: Section A, Section B and Section C.

**Table 1** Sections of Questionnaire

Section A	Demographic Information
Section B	Teachers' Perceptions and Beliefs on HOTS Questions
Section C	Teachers' Self-Reflection on Questioning Techniques used in Teaching and Learning

As shown in Table 1, teachers were asked about their demographic details such as gender, teaching experience and their highest level of education in Section A. For Section B, teachers were asked on the perceptions and beliefs towards implementing HOTS in ESL classrooms. The items in this section were rated on a 3-point Likert-Scale (1= “disagree”, 2= “not sure” and 3= “agree”). Meanwhile, Section C aims to identify teachers' self-reflection on implementing HOTS in their lessons. The items in this section were rated on a 3-point Likert-Scale (1= “seldom”, 2= “sometimes” and 3= “often”).

A total of twelve English secondary school teachers were the respondents, of whom eleven of them (91.68 percent) were female while one (8.32 percent) male. In terms of classes taught, nine of them (75 percent) were currently teaching lower form meanwhile three of them (25 percent) were upper secondary English school teachers. Eleven of them (91.68 percent) were bachelor degree holders whereas only one (8.32 percent) was a master holder. However, only two teachers were selected for the class observations and interviews. All twelve of them were involved in the implementation of HOTS in the ESL programme.

Finally, the aim of the interviews was to triangulate the findings of the questionnaires. Respondents were two English teachers whose lessons were recorded. They taught Form 3 intermediate and low level students. In this study, semi-structured interviews were carried out with four open-ended questions. The questions asked were on teachers' perceptions of HOTS, teachers' techniques in employing HOTS question types and as well as the challenges faced in incorporating HOTS as a means of cultivating students' critical thinking.

The data from the class observations and interviews were analysed using thematic analysis and the results were categorised into types of question favoured by teachers, teachers perceptions and challenges of incorporating HOTS questions in ESL classrooms. In the thematic analysis carried out, the questions posed by teachers were coded into two categories: HOTS and LOTS. The categories were based on the six levels of Bloom's Taxonomy, of which knowledge, comprehension and application form linkages to LOTS since students are simply required to recall a single fact and do not involve critical thinking. Meanwhile, HOTS questions include analysis, synthesis, and evaluation by which students are requested to show their comprehension of the topic, situation or solution to a stated problem. In this study, display questions are categorised as LOTS whilst referential questions are HOTS.

The data from the questionnaires were analysed using descriptive statistical analysis and the results were presented in the form of percentage. The challenges faced by teachers in implementing HOTS were coded based on two factors, which are teachers' perceptions of HOTS and students' attitudes towards HOTS. In terms of teachers' perceptions, three factors were identified which are

teachers' knowledge about HOTS, teachers' attitudes towards HOTS, and teachers' skills in employing HOTS questions in ESL classrooms.

## QUESTION TYPES EMPLOYED BY ESL TEACHERS

The analysis done on the classroom observation data found that out of fifty-one questions posed by teachers only two were referential questions (3.92%) whereas the other forty-nine were display questions (96.08%). In addition, the findings from the questionnaires show that seven out of ten teachers (70 percent) claimed they often use display questions which require short or one-word answers rather than referential questions which demand longer answers related to their opinions. According to Thornbury (1996), display questions refer to questions of which the teacher already knows the answer and the kind that demands only a single word or short response. Referential questions, on the other hand, demand deeper level cognitive processes and require the students to produce a longer response. Additionally, the fact that referential questions are categorised as HOTS and are more open in nature, the teachers may not know the answers in advance (Brown, 2001). We can, therefore, infer that teachers prefer LOTS questions, or display question types, while HOTS questions are not favoured in ESL classrooms.

Extract (T1) 1.1 illustrates some of display questions used by Teacher 1 (T1) who taught Form 3 intermediate class. The lesson was on reading comprehension, of which the teacher asked several questions to test students' understanding of the reading text.

### Extract (T1)1.1: turns 8-13

- 8 T** : okay, alright now... okay... aaa look at page six, look at page six. Okay, alright, question C, read the travel brochure below then answer question A until I. Okay, visit enchanting Kelantan, what's the meaning of enchanting?
- 9 S** : ermmm...
- 10 T** : yes, what is the meaning of enchanting?... [Pause] yes, what is the meaning of enchanting?...
- 11 S** : ermm, cantik
- 12 T** : in English?
- 13 S** : Beautiful.

Based on Extract (T1)1.1: turns 8-13 above, the type of questions used by the teacher is categorised as a display question as it clearly shows that the teacher already knew the answer. For instance, when the teacher asked about the meaning of "enchanting" to her students, she expected all of the students to know the meaning of the word since it can be found in the reading text. Based on Bloom's Taxonomy, this type of questions is labelled as knowledge as it involves the basic cognitive process, such as, remembering and retrieving previously learned material. Learners are only required to use the skill of remembering when the memory is used for producing definitions,

facts or retrieved materials (Anderson & Karthwohl, 2001). As mentioned earlier, most teachers tend to use display questions rather than referential questions since teachers often assume that display question is mainly a quicker way to assess whether the students have understood the content of the text (David, 2007; Boyd and Rubin, 2006). Thus, HOTS question was not found in this extract as the questions posed by T1 did not require students to integrate critical thinking in their response and furthermore only short answer was expected from them.

Another example of display questions is found in Extract (T1) 1.2. Display question was used by the teacher to ask the meaning of “compound”. Realistically, the teacher already knew the answer and she expected the students to produce the same answer. In Extract (T1) 1.2, the teacher waited for a while so that students could give the expected answer. For example, the teacher asked the meaning of “compound” and the students said “surround” at the beginning. However, she waited and guided the students until they could give the expected answer by adding suffixes “-ing” at the end of the word. Giving more time for students to answer will lead students towards an active participation (Nunan, 1990; 1991).

Extract (T1)1.2: turns 56-63

- 56 T** : okay, very good. It’s a mosque... not mos queue. Okay... alright, now, erm...[Pause]. Okay, erm... [Pause]. Compound? What’s the meaning of compound?
- 57 S** : (inaudible 11:36)
- 58 T** : yes, in English please.
- 59 S** : [cough]... errr...
- 60 T** : compound?
- 61 S** : surround, surround
- 62 T** : surround...?
- 63 S** : surrounding... surrounding

Based on the extract above it can be inferred that students gave full participation when waiting-time was given. This was supported by Jiang's (2014) study, as it showed that teachers who did not push their students to answer right away but rather gave the students more time to do some research would make the students hold positive attitude about the lesson and help them understand and remember the information easily.

Failing to sustain the interaction between teacher and students may lead to misunderstanding between them, and thus, the objective of the lesson will not be achieved (Nunan, 1991). Extract (T1) 1.3: turns 70-71 illustrates T1 used a true or false type of display questions to create interaction with his students.

Extract (T1) 1.3: turns 70-71

- 70 T** : [Pause] okay, alright... so... alright... by looking at the questions at page seven, we have to look at page seven, okay... page seven [Pause]. Is on the travel brochure state whether the following statements are true or false?
- 71 S** : false.

It was found that there was a positive interaction between T1 and the students. All of the students gave full participation in answering this type of questions. Kachur and Prendergast (1997) indicated that the possibility for teachers to use display questions is to promote students dialogue. Thus, it can be deduced that T1 used display questions to enable her students to give full participations during the teaching and learning process. In other words, the display questions are actually used to monitor or facilitate students to talk and to avoid them from keeping silent in language classrooms.

Some of the referential questions were identified in the observation transcriptions. Nevertheless, the findings of this study revealed that HOTS questions are still underused in ESL classrooms. This is because only two out of twenty-six questions were classified as HOTS questions and the rest were categorised as LOTS. The examples of referential question found in the data are shown in the Extract (T1) 1.4: turns 146-148 and Extract (T1) 1.5: turns 156-229.

Extract (T1) 1.4: turns 146-148

**146 T** : cave... Alright... [Pause] okay, why do you think the word amazing is used to Describe Gunung Reng? [Pause] why...?

**147 S** : because it is an interesting place to visit

**148 T** : yes... okay, as a class can you answer it? Why do you think the word amazing is used to describe Gunung Reng?

Extract (T1) 1.4: turns 146-148 illustrates an example of referential questions used by the teacher which requires the students' opinion about the word 'amazing' used to describe Gunung Reng. It was a subjective question and the answers might vary. Students were required to justify their answer through longer responses. As a result, this may give them opportunity to speak out in the target language. Following Onosko and Newman (1994), who indicated that higher-order thinking skills are known as the expanded of mind where the person must analyze or interpret the answer or to manipulate the information since the correct answer is not always gathered from the daily routine or knowledge, this question was thus categorised as HOTS. In addition, Anderson and Karthwohl (2001) claim that HOTS questions require learners to break the concepts into different parts in order to determine how those parts are related or interrelated to each other. Here, the student gave the answer based on the knowledge he or she had and tried to relate why the word 'amazing' is used in describing Gunung Reng.

Extract (T1) 1.5: turns 156-159 is another example of referential question which basically asked about why the city of Kota Bharu was worth to explore by foot. Since there are many possible answers to the questions which basically lie within the students' opinion or general knowledge about Kota Bharu, this type of questions resulted in active learning (Prince, 2004).

Extract (T1) 1.5: turns 156-159

**156 T** : lime...? Stone. Okay [Pause] okay, alright, why do you think the brochure says That Kota Bharu is best explored on foot? Why..? Why? You have to think..why..? This one you have one by one to answer, why? Why by foot?



**157 S** : because to get explored every eye catching places without worrying about the transport and enjoy beautiful scenery [Pause]

**158 T** : Kota Bharu by foot. Why? You have to think. Why...? [Pause]

**159 S** : have some interesting place

In the interview session, T1 explained the importance of HOTS questions in developing students' critical thinking skills. T1 also highlighted that regular use of HOTS questions can help students relate those questions to their real life activities. Nevertheless, as mentioned earlier, only two out of twenty six questions were categorised as HOTS questions. This signifies that the majority of the questions used in class were display questions or LOTS.

The second respondent or T2 taught Form Three English class and the students were categorised as low level students. The lesson recorded was on reading comprehension with a simpler reading text used to match the students' level. The analysis of the classroom observation showed that there was no HOTS question used. All of the questions posed by the teacher were categorised as display questions, even though the teacher believes in the usefulness of HOTS questions for ESL students to develop their critical thinking.

Several extracts are taken from the transcriptions to show the display questions used by T2. For example, Extract (T2) 2.1 illustrates the display questions which are in the form of turn-taking of initiation-response-evaluation (IRE).

Extract (T2) 2.1: turns 5-8

**5. T:** okay, thank you. [Pause] alright, okay, I will read once again... Awang Batil is famous story-teller. What is the meaning of story- teller? [pause] yes... what is the meaning of story-teller? Yes... someone raise up the hand. (Inaudible 01:54). Okay, alright, what's the... what is the meaning of story teller?

**6. S:** *pencerita*.

**7. T:** *pencerita*. The person who...?

**8. S:** err... tell about the story...

According to Mehan (1978), the three-turn sequence of initiation-response-evaluation (IRE), or also known as Initiation-response-feedback (IRF), is the common sequential contexts of teacher-student-teacher turn-taking found in ESL classrooms. In the "initiation" (I) phase, the teacher will ask a question of which the students will respond to (R) and followed by feedback by the teacher (F). Based on Extract (T2) 2.1, at the initiation phase (I) the teacher asked about the meaning of story-teller and the students gave their answer (R) in Malay. The teacher then commented on the inadequacy of the reply (F) and gave a clue to the answer "*the person who...*" which then enabled students to explain the meaning of story teller. Given the fact that IRE sequences are an effective means of monitoring and guiding students' learning (Christie, 1995; Mercer, 1992), it is thus suggested that display questions should be used with low level students. Another example of a display question used by T2 is illustrated in Extract (T2) 2.2.

Extract (T2) 2.2: turns 123-128

- 123.** T : okay, very good. So... number eight the answer is...? C... wrapped... present.. Okay...? [pause] okay, now, look at page number eight. Okay... look at page number eight. (Inaudible 19:32). Okay, when we summarize a text, we can categorise or classified with of these. There is no need to elaborate of this example in your summary, okay..? Use your own word as far as possible and check your grammar. Okay, now. These words or a phrase for each of the following? Number one, okay, there is rambutan, langsat, orange, mango, apple. What we called it? What we call it?
- 124.** S :fruits
- 125.** T :yes. Very good. the answer is...? Fruits. Okay. Okay, fruits. Okay, F, R, U, I, T, S. fruits. Okay, what about nurse, doctor, teacher, postmen, architect?
- 126.** S :(inaudible 20:43)... occupation.
- 127.** T : yes, occupation. So, how to spell?
- 128.** S: O, C, C, U, P, A, T, I, O, N, S

In Extract (T2) 2.2, the first question in turn 123 was a display question, which required students to find an appropriate category for the words “rambutan, langsat, orange, mango and apple”. The teacher expected the students to get the answer from the text since the question is identified as ‘knowledge’, that is the lowest category of cognitive process in Bloom’s Taxonomy. It is therefore classified as a LOTS question.

In order to determine the frequency of display and referential questions used by the teachers, the occurrences of both types of questions were calculated. Table 2 shows percentage of display and referential questions found in the data. T1 used 24 display questions and 2 referential questions while T2 eventually used only display questions in her classroom.

**Table 2** Question Types Used by ESL Teachers

QUESTION TYPES	FREQUENCY		
	Intermediate	Low- level	
	T1	T2	Total
1. Display Questions	24	25	49 (96.08%)
2. Referential Questions	2	0	2 (3.92%)
<b>Overall Total</b>	<b>26</b>	<b>25</b>	<b>51</b>

The results show that a total of 51 questions were asked by the teachers. Of the 51 questions, 49 questions (96.08 percent) were display questions while only 2 questions (3.92 percent) were referential questions. Based on the findings, it can be claimed that the display questions were preferable compared to referential questions, thus signifying that majority of the questions asked by the teachers are categorised as a low-level type or LOTS. These results are supported by Nunan (1987) who stated that a teacher usually asked predominantly display questions rather than referential questions in class. The students' low level of proficiency was the main reason for teachers to use display questions but not referential questions.

The findings of the analysis done on T1 and T2 in classroom interactions revealed that most of the questions were indeed LOTS where the answers required were in the form of multiple-choices (A, B, C, and D), true or false, spelling, short phrases or one sentence answers. Table 3 shows the types of LOTS questions employed by both teachers.

**Table 3** Types of Display Questions (LOTS)

No.	Items	Teacher 1	Teacher 2
1.	Posing a series of questions	✓	✓
2.	Accepting one answer for each question	✓	✓
3.	Elaborating on students' answers	✓	
4.	Providing answers to own questions.	✓	✓

The results in Table 3 indicate that T1 and T2 had the tendency to pose a series of questions to their students, however, T2 might have posed fewer questions compared to T1 because the students are of different proficiency levels. T1 taught intermediate level Form 3 class whereas T2 taught low level Form 3 class. In the classroom interaction observations, both teachers seemed to accept one answer for each question before moving on to the next question. This shows that the teachers did not expect or did not allow other students to respond to the same question. In conjunction to this, Habsah Hussin (2006) in her research related to the higher-order thinking skills (HOTS) found that teachers tend to use low level questions instead of high level questions. The teachers were observed to be satisfied in accepting only one answer for each question before moving on to the next question without allowing other students to answer the same question. By conducting this restrictive manner of questioning, the students seemed to eventually become discouraged to participate in class.

In addition, the results from class interaction observations also revealed that ESL teachers have a tendency to elaborate the answers given by students, in other words, to interject their own answers into students' responses without giving the students an opportunity to complete their answers. *Extract (T1) 2.4: turns 66*, for instance, shows that T1 provided an answer to her question without giving students an opportunity to respond:

Extract (T1) 2.4: turns 66

**66 T** : compound. Alright, now, guerillas... guerrillas... communist guerillas. What is that? Guerillas? There are bunch of guys. There...lots of... lots of armies...or... ermm...communist. Yes, that's are mean like trying... Okay, communist some kind of... the past...previous... okay, the past thing happened. Like when... Malay... Malayan been attacked by communist. Communist who is trying... okay? Bintang Tiga. You already know, right? (inaudible 12:46) who... want to invaded Malaysia. That when... they are not. They can't. Okay?[Pause] alright, so... [Pause]. Legend, what is the meaning of legend?

The teacher formulated the question based on the reading text. *Extract (T1) 2.4: turns 66* shows that T1 gave the answer about the meaning of “guerrillas”. She elaborated the answer and did not give the students an opportunity to share their knowledge about “guerrillas”. The findings of this study confirm that ESL teachers tend to use display questions which test the students’ memory but not their comprehension. This does not seem to fit well with the demands of present day teaching which require the incorporation of deep level thinking skills. In other word, the questions in language classrooms should also include referential types since referential questions emphasize on the meaning so that students will have the chance to think critically, speak and participate more in the discussion.

## CHALLENGES OF INCORPORATING HOTS QUESTIONS IN ESL CLASSROOMS

The findings of this study show that there are several challenges that teachers’ faced while employing HOTS questions in ESL classrooms. The problems are clustered into two categories which include teachers’ perceptions and students’ attitudes towards the implementation of HOTS in ESL classrooms. As mentioned previously, teachers' perceptions include their knowledge on HOTS, attitudes and skills in adopting HOTS questions in their lessons.

First and foremost this study found that lack of knowledge on how to implement HOTS is one of the factors that contributes to the challenges in incorporating HOTS in ESL classrooms. In the interview sessions with the teachers, T1 and T2 admitted that the problems came from teachers who do not have sufficient knowledge about HOTS and apparently, both of them agreed that lack of knowledge pertaining to HOTS is expected since HOTS is recently introduced to the education system. In conjunction to that, Nagappan (2001) studied the teachers’ perceptions in terms of readiness in conducting teaching and learning of HOTS from twenty-two selected schools. In the study, teachers were asked about their knowledge regarding the curriculum for English and Malay language teaching and also HOTS. The result shows that since some of the teachers lack the knowledge of how to conduct a lesson on HOTS, they have the tendency to employ a teacher-centered approach.

In addition, T1 claimed that so far questions asked in class tend to focus on the comprehension of the subject matter rather than developing students' critical thinking. As a result, teachers normally only

accept one answer for each question before moving on to the next question since their ultimate aim is to check students' understanding. However, it gives less opportunity for students to speak and give their opinion. More interestingly, teachers also tend to provide answers to their own questions and types of questions posed are basically depending on the students' levels of proficiency. This thus suggests that teachers need time to adapt to the new requirements.

More importantly, the results from the questionnaire clearly show that teachers are in need of continuous training in the implementation of HOTS in L2 classrooms. In the interview sessions, both interviewees, T1 and T2 stated that English teachers are in need of adequate training on HOTS before they can successfully implement HOTS in their lessons. This might help them to gain knowledge as well as experience when they have a chance to share views with others in employing HOTS questions in their lessons and this, in turn, would benefit the teachers in the long run. In addition, teachers could know which HOTS question is appropriate to use according to the students' level. In line with this, Nickerson *et al.* (1985) claim that teachers need to be trained in order to be able to apply high level thinking skills in class. It cannot be assumed that higher order thinking skills would emerge automatically by maturation (Nickerson *et al.*, 1985). In other words, teachers need to gain the experience and have the knowledge about HOTS first before they can apply it in their classrooms.

Another striking problem that teachers encountered in implementing HOTS was students' attitude. Based on the interview sessions, the teachers claimed that the students' low level of proficiency results in the great challenge for applying HOTS questions. Low achievers seem to have difficulty to adapt to new changes. A report released by the Federal Inspectorate of Schools, Malaysian Ministry of Education (2000) stated that students were still lacking in critical and creative thinking skills. Most of them were unable to produce original and unique ideas, resulting in a hurdle for teachers to apply HOTS in classrooms.

The low level students even have difficulties in responding to display questions. From the data, two types of students were observed: 1) students who tend to use short answer; 2) students who did not even understand the questions posed by the teachers.

It can, therefore, be deduced that the teachers used display questions to encourage students to take part in the class interactions. In the interview session, T2 claimed that if she used referential questions in class, the students might have problems in answering those questions and would probably would refuse to answer the questions at all. Analysis from the questionnaire also show similar results, by which 70 percent of the teachers stated that their students often responded with short answers and less number of students participated when teachers posed HOTS questions. Likewise, Boyd and Rubin (2006) claimed that text based talk is presumed to encourage lower levels of comprehension and entail display questions, which elicit single-word answers rather than extended discussion.

## CONCLUSIONS AND RECOMMENDATIONS

The findings of this study found that ESL teachers tend to use display questions rather than referential questions in their classrooms. Even though there were some referential questions identified from the data, the frequency for the referential question used was very small. One of the reasons is

that most of the students gave positive feedbacks towards display questions compared to referential questions as this type of questions are much easier to answer and do not require critical thinking. This concludes that the use of HOTS questions is still limited and not favoured in ESL classroom contexts. Even though there is a limited use of HOTS questions, majority of the respondents give positive feedback towards the implementation of HOTS in ESL classrooms. Most teachers are aware of the importance of HOTS, however, they face some challenges in applying HOTS due to lack of knowledge, teachers' attitudes and students' low proficiency levels.

We identified several implications of this study, for example, to incorporate HOTS questions in ESL classrooms, teachers should first be aware of their students' level of proficiency since students' proficiency levels determine the suitable types of HOTS questions to be used. The HOTS questions should correspond to the students' real life situations and thus, this can generate students' interests as well as motivation. Besides that, teachers also need to prepare themselves in terms of their knowledge, pedagogical skills and attitude in implementing HOTS questions and this can be achieved through attending HOTS training courses (Stiggins, Griswold, and Wikelund, 1989).

The future studies on HOTS should look into students' perceptions towards HOTS besides teachers' perceptions. It would be appropriate if the future researchers investigate students' perceptions as well to get more reliable data. In addition, studies on how the HOTS questions can be successfully incorporated in ESL classrooms are highly needed.

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