ISSN: 0128-7702
Pertanika J. Soc. Sci. & Hum. **18 (S)**: 65 - 85 (2010)

Infusion of Thinking Skills in English Language Instructional Development at Tertiary Level

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ABSTRACT

The inclusion of thinking skills in a subject is considered necessary to ensure that students develop their thinking and possess greater control of their learning. To determine if the infusion of thinking skills is present in a subject, an evaluation of the subject from the planning to the assessment stage needs to be carried out. This study aims to evaluate the level of emphasis in the infusion of thinking skills in English language instruction in a Diploma Science program in a higher institution in Malaysia. A comprehensive study was carried out on the major stages of the instructional development based on Chen's Taxonomy of Program Evaluation (2005). Specific data from documents was collected and analyzed, after the data was categorized according to the level of thinking skills listed in the Cognitive-Affective Taxonomy (Ghazali Mustapha, 1998) and the Mental Operation Questions (Moore, 1995). The three stages of the instructional development were then tied up to determine if they complement each other in the infusion of thinking skills. The quality of instruction provided will contribute to the success of the whole program, enabling students to possess equal opportunity to explore knowledge in depth and allowing them to apply it more effectively in the real world.

Keywords: Assessment, English, evaluation, instruction, implementation, planning, tertiary, thinking

INTRODUCTION

There are still many issues to be discussed in relation to the teaching of thinking skills, especially in higher education. Many higher institutions of learning are still bound to the elements of tradition in setting a program (Darn, 2006), resulting in the practice of conventional teaching and learning. Presently, many higher institutions have a scenario where lectures and rote-memorizations are very much a part of the teaching and learning process (Paul, 2005; Paul et al., 1997; Darn, 2006). The system is still not open to new ideas, values and thoughts, and curriculum development is influenced by the subject matter, making it content-based (Sowell, 2000). As a result, there is a lack of emphasis in thinking skills across the curriculum. In many cases, failure in infusing thinking skills in the subjects produces knowledge-based syllabus (Sandel, 2002; Noor Zainab, 2003).

Curriculum content affects teachers' approach to teaching (Sandel, 2002) and since there are limitations, teachers are forced to work within the boundaries set in the curriculum and exam requirement (Darn, 2006). Many teachers see themselves as responsible only for transmitting knowledge according to the required curriculum to students (Jayakaran, 2003; Noor

Received: 3 June 2010
Accepted: 14 October 2010
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Zainab, 2003). There is a minimum need for teachers to guide students through the teaching of thinking skills. Recent studies (Zohar, 1999; Rajendran, 2001; Ghazali Mustapha, 2000, 2006; Anna Christina Abdullah et al., 2003) have shown that there is still lack of practice by teachers in posing higher order questions to students, and this resulted in limiting students from thinking creatively and critically. Teachers were observed to elicit questions which are at the lower-order level of thinking skills (Barrickman, 1997; Rajendran, 2001; Ghazali Mustapha, 2000; Rosma Osman et al., 2004). As a result, students are deprived from having teachers as facilitators to guide them in thinking and build meaning of their own from what they have learnt (Chan and Wong, 2004).

Besides that, an individual with good thinking skills will also be able to manage the knowledge that he receives (Anna Christina Abdullah et al., 2003). With thinking skills, the young generation will be able to face the realities of life and today's world issues (Beyer, 1988), and be better equipped when they enter the workforce (Hinterer, 2002). Therefore the teaching process in the classrooms should provide students with some space in using thinking skills, thus allowing students to think freely and creatively on how to deal with daily problems.

The main purpose of this study, then, is to carry out an evaluation on an English language subject in the Diploma Science programme at the tertiary level with the following objectives:

i. To determine the presence of thinking skills in an English language subject.

ii. To identify the level of thinking skills emphasized in the subject.

iii. To determine if the planning, implementation and assessment levels complement each other in relation to the infusion of higher order thinking skills.

This study will give new insights and emphasis in relation to the evaluation of the teaching of thinking skills among ESL learners. The results of this study also furnish additional knowledge on the improvement that can be made in the planning, implementation and evaluation stage of a programme. This complete process of evaluation in the study will then provide as a framework that can be used as a basis for other programme evaluations.

METHODOLOGY

The subject evaluated is called BEL 120, an English language subject taught to the first semester students of the Diploma Science programme in a Malaysian university. The sampling is taken from a Science-based programme since thinking and problem-solving skills are supposed to be developed and become part of the objectives of instruction. (Zohar and Tamir, 1993; Kuhn, 1993). The evaluation is carried out at three stages of the instructional development adapted from Chen's Taxonomy of Programme Evaluation (2005), namely the planning stage, the implementation stage and the assessment level of the instructional process. At the planning stage, the evaluation is carried out on the curriculum and the teaching materials for the subject. The evaluation at the implementation stage involves classroom audio recording and an interview with the teacher. At the assessment level, the evaluation includes analyzing exam question papers for the subject.

The research is basically qualitative, with some quantitative data. Data collection is carried out through the analysis of documents listed in Table 1.

The analysis on the documents is carried out through content analysis, and the level of thinking skills is measured using the categorization listed in the COGAFF Taxonomy (Ghazali Mustapha, 1998). In addition, another tool of measurement, the Mental Operation Questions (Moore, 1995), is also used to determine the level of thinking skills in the questions and tasks found in the documents, with the exception on the syllabus, course content, and the scheme of work.

COGAFF Taxonomy was one of the major contributions of Ghazali Mustapha's Ph.D Study done in Leicester University, UK. His study was related to Thinking Skills infusion by teachers

TABLE 1
Analysis of documents

Instructional development		Documents involved
Planning level	Curriculum	Syllabus, course content, scheme of work
	Teaching materials	Textbook & Workbook
Implementation level	Classroom audio recording	Tape scripts
	Interview	Tape scripts
Assessment level	Final exam questions	Written exam papers

in handling Reading Comprehension. His work has been made available on the Eletronic Thesis On-line Services (EthOS) in the British Library (http://ethos.bl.uk). The taxonomy is formulated from a combination of Bloom's Cognitive Taxonomy (Bloom, 1956) and Krathwohl's Affective Taxonomy (Krathwohl, 1956). The word "COGAFF" itself derives from the words "cognitive" and "affective." The taxonomy is used as a tool to measure the cognitive and affective level in the question types and tasks posed in the learning situations. COGAFF Taxonomy consists of seven categories of questions, starting from the highest level of thinking skills, the affective skills, moving down to evaluation, synthesis, analysis, and application, and the lower order thinking skills, comprehension and knowledge. The Mental Operation Questions (Moore, 1995) is a system for classifying questions, which is developed based on Guildford's Structure of the Intellect model (1956) and Bloom's Taxonomy (1956). Here, four categories of questions are developed: factual, empirical, productive, and evaluative. For analysis purposes in this study, a checklist for each category is given in Appendix 1.

RESULTS AND DISCUSSION

The results of the analysis for this study are tabled according to the three stages of the instructional process, starting with planning, implementation, and finally the assessment level.

The Planning Level

At this level, the evaluation is divided into two parts: analysis of the curriculum and the analysis of the teaching materials.

Analysis of the Curriculum

For the curriculum, the syllabus, course content and the scheme of work are analyzed, guided by the categorization listed in the COGAFF Taxonomy. The study on these documents will move towards looking for keywords that indicate the use of thinking skills according to the items listed in the COGAFF Taxonomy (Ghazali Mustapha, 1998). From the analysis of data, it is observed that both lower and higher order thinking skills are given equal amount of priority in the teaching objectives. Table 2 shows that 50% of the elements of higher order thinking skills are present in the teaching objectives, whereas the other 50% lies in the lower order thinking skills. The higher order thinking levels that are present in the teaching objectives are identified as the synthesis level, which is utilized to write well-organized paragraphs and essays, and application level that is used to write grammatically correct sentences. For the lower thinking skills, the emphasis is given mostly to the comprehension level, since some of the objectives of the course are to comprehend passages, and listen to and understand a variety of texts.

Even though the teaching objectives of BEL 120 aims to promote both lower and

higher order thinking skills, it is observed that the course content and the scheme of work have more elements related to the lower order thinking skills, compare to those related to the higher order thinking skills. According to the descriptor in Table 2, 52% of the items in the course content and the scheme of work cater to the lower order thinking skills. The lower-order thinking skills involve students to gain accuracy in using grammar in the language, thus, require students to acquire knowledge and recall information that they receive. If the grammar that is taught is aimed to provide students the opportunity to explore the text in a more meaningful way, the course content and the scheme of work would promote the elements of higher order thinking skills. In addition, there are also some elements that develop students' knowledge and comprehension level as the course content includes identifying topic sentences, outlining, and presenting main ideas. These elements of lower-order thinking skills could be transferred into higher order thinking skills if the activities involved making inferences and drawing conclusion, as shown in the 48% of the items (Table 2) in the course content and the scheme of work that are catered to the higher order thinking skills. Besides those activities mentioned earlier, skills involving mostly the analysis and synthesis levels can also be found in activities such as brainstorming and the writing of thesis statements, topic sentences, and the whole essay. The scheme of work for this subject has also included evaluation skills, as students are required to express agreement and disagreement, use reasoning powers and justify opinions in the teaching of speaking skills.

In summary, the analysis on BEL 120 curriculum shows evidence of both lower and higher order thinking skills in relation to the teaching of thinking skills. However, the inclusion of higher order thinking skills is limited to mainly analysis and synthesis levels, with a touch of the evaluation level. The highest level of the higher order thinking skills found in the COGAFF Taxonomy, the affective level, is still unavailable in the curriculum for this subject. Considering that the syllabus is the main frame in the planning of a programme, it is important that the higher order thinking skills from the level of analysis to affective being included and highlighted into the syllabus at the tertiary level.

TABLE 2
Analysis of the BEL 120 syllabus at the planning stage

Level	Taxonomy	Frequency of descriptors						Total of frequency	Frequency of higher and lower order thinking skills
		Teaching objective		Course content		Scheme of work			
7	Affective	0	50%	0	48%	0	48%	0	35 (48%)
6	Evaluation	0		0		2		2	
5	Synthesis	1		6		7		14	
4	Analysis	0		2		5		7	
3	Application	3		3		6		12	
2	Comprehension	3	50%	7	52%	6	52%	16	38 (52%)
1	Knowledge	1		5		16		22	

The fact that evaluation placed highest in the cognitive domain is not necessarily highest in thinking or problem solving. Bloom et al. (1956) suggest that evaluation may lead to the affective domain, which is one reason why it is placed last as the highest level in the higher-order category of the COGAFF taxonomy. Other reasons for placing the affective domain last in the taxonomy may include;

i. Feelings and attitudes (affective aspects) are elements of emotional climates often come into play once a cognitive assessment (involving analysis, synthesis, or evaluative) is engaged. For example, a student might only be able to express his/her feelings and/or attitudes over an issue once he/she has made a cognitive assessment of the issue (Edwards and Mercer, 1987). However, sometimes the reverse process happens.

ii. Effective teaching includes recognizing that all students bring their feelings, as well as their minds and bodies, into the classroom. Understanding how to engage and capitalize on this internal state of needs, preferences, anxieties, curiosity, and excitement will be the dynamic which transforms the classroom into a place where learning is recognized by the students as something to be valued for itself rather than as a means to someone else's evaluation (Morgan and Saxton, 1991).

Barrett's (1972) Taxonomy of *Cognitive and Affective Dimensions* categorized comprehension skills into five major levels: Literal comprehension (1.0), Reorganization (2.0), Inferential Comprehension (3.0), Evaluation (4.0), and Appreciation (affective) (5.0). The tasks in each category have been structured from easy to difficult. Barrett (1972), according to Clymer (1968), utilized the work of Bloom, Sanders, and Guszak in designing the taxonomy, and explicitly categorized the affective domain (which he refers to as appreciation) as the last category in his taxonomy. This further supports placing the affective domain as the highest category (7.0) in the COGAFF taxonomy.

With the inclusion of all seven levels of thinking skills in the syllabus, only then, the infusion of thinking skills in the instructional development becomes successful at the implementation and assessment levels.

Analysis of the Teaching Materials

For the teaching materials of BEL 120, the overall analysis that is carried out using the categorization listed in the COGAFF Taxonomy and Mental Operation Questions shows that lower order thinking skills are more frequently utilized than the higher order thinking skills in the questions and tasks found in the modules. From Table 3, it is found that the integration of lower order thinking skills is at 42% and the higher order thinking skills is at 58% in the questions and tasks. The highest frequency of lower order thinking skills are found mainly in the reading (81%) and listening (85%) sections (Table 3). Similar frequency is found in the categorization done by Mental Operation Questions (Table 4).

In these two language skills, the lower order thinking skills are especially found at the comprehension level. For example, the reading comprehension questions are mostly limited to questions at the knowledge and comprehension levels, such as true-false questions and comprehension questions (Appendix 2, Sample A, No 3 & 4). The listening section also offers questions and tasks that are lower order in nature. For example (Appendix 2, Sample B, No 2 & 3), students are asked to listen and match the people and make a note of where and when each of the people met, and what they said to each other. These types of questions can be converted into higher order form if they include predictions, such as asking who the people might be and what they might be saying to each other.

Even though the overall analysis on the teaching materials of BEL 120 have shown that more emphasis is given to the lower order thinking skills in the design of questions and tasks, the writing and speaking sections do consist of questions and tasks that are mostly higher order in nature. Table 3 shows that the

TABLE 3
Analysis of the questionings/tasks in the teaching materials at the planning stage for BEL 120 (COGAFF Taxonomy)

Level / Taxonomy	Frequency of descriptors											
	Questionings/Tasks										Total	
	G		R		W		L		S			
7 Affective	0	59 (50%)	0	22 (19%)	0	22 (76%)	0	7 (15%)	3	49 (67%)	3	159 (42%)
6 Evaluation	0		1		1		0		6		8	
5 Synthesis	1		0		9		0		9		19	
4 Analysis	3		13		6		4		21		47	
3 Application	55		8		6		3		10		82	
2 Comprehension	22	60 (50%)	55	93 (81%)	4	7 (24%)	34	39 (85%)	7	24 (33%)	122	223 (58%)
1 Knowledge	38		38		3		5		17		101	

TABLE 4
Analysis of the questionings/tasks in the teaching materials at the planning stage for BEL 120 (Mental Operation Questions)

Taxonomy	Frequency of descriptors											
	Questionings/Tasks										Total	
	Grammar		Reading		Writing		Listening		Speaking			
Factual	49	49 (49%)	89	89 (75%)	10	10 (29%)	35	35 (85%)	16	16 (27%)	199	199 (56%)
Empirical	51		27		13		6		30		127	
Productive	1	52 (51%)	1	30 (25%)	11	25 (71%)	0	6 (15%)	10	43 (73%)	23	156 (44%)
Evaluative	0		2		1		0		3		6	

frequency of higher order thinking skills in the writing section is at 76% and in the speaking section is at 67%. Similar results can be seen in Table 4, in which the frequency of higher order thinking skills in the writing section is at 71% and in the speaking section is at 73%. Both sections provide students opportunity to utilize their thinking skills at the higher order thinking skills mainly at the application, analysis, and synthesis level.

In relation to thinking skills, the teaching material for BEL 120 does not show consistency in the inclusion of all stages of thinking skills, especially in the higher order. The teaching materials need to be specially designed to ensure that all domains of thinking skills are equally covered, and at the same time, complement fully with the required curriculum.

The Implementation Stage

A study on the implementation level is carried out to determine the level of thinking skills that is infused in the classroom of BEL 120. It covers classroom audio recording and an interview with the subject teacher.

Classroom Audio Recording

The classroom audio recording consists of recorded data taken in the classroom, as well as transcribed and analyzed. There are six classroom scenes recorded during one semester of the programme. Three recordings are selected for the purpose of this analysis. Each class is conducted for approximately two hours.

The actual teaching that takes place in the classrooms has shown that questions are posed to the students continuously throughout the session. However, based on the descriptors on COGAFF Taxonomy (Table 5), most of the questions and tasks posed at the lower order thinking level amount to 59%, whereas those of higher order thinking level amount to 41%. The descriptors on Mental Operation Questions (Table 6) also portrays a similar result, in which lower order thinking questions and tasks are found at 51%, and higher order thinking questions and tasks at 49%.

The lower order thinking skills involved in the questions posed to students are mostly at the knowledge level. For example, when the teacher explains about how to write an essay, students are asked the following questions to test their knowledge on the topic of the essay.

Why is reading important?
Do you think that reading is important?
(Appendix 3, Excerpt 1)

The higher order thinking questions posed to the students is at the analysis level. In relation to a topic on reading for essay writing, the teacher posed the following questions.

Can you give me the supporting detail for why reading is important for students?
If I say reading is important for students, what is the big question that you have in your mind?
(Appendix 3, Excerpt 1)

Questions at the analysis level can also be found in the questioning related to grammar which deals with error analysis. Even though there are questions posed at the analysis level, there is no evidence of other types of higher order thinking questions such as evaluation and the affective levels.

Besides posing questions to the students, the teacher has also given out tasks for the students to handle inside and outside the classroom.

TABLE 5
Analysis of the classroom scenes at the implementation stage for BEL 120 (COGAFF Taxonomy)

Level	Taxonomy	Frequency of descriptors	Frequency of higher and lower order thinking skills
		Question type / Task	
7	Affective	0	29 (41%)
6	Evaluation	0	
5	Synthesis	7	
4	Analysis	10	
3	Application	12	
2	Comprehension	15	41 (59%)
1	Knowledge	26	

TABLE 6
Analysis of the classroom scenes at the implementation stage for BEL 120 (Mental Operation Questions)

Categories of questions		Total number of questions and tasks	Total number and percentage of lower and higher order thinking skills
Mental Operation Questions	Bloom's Taxonomy		
Factual	Knowledge & comprehension	36	36 (51%)
Empirical	Application & analysis	27	34 (49%)
Productive	Synthesis	7	
Evaluative	Evaluation	0	

Most of the tasks given to the students in the classrooms are at the lower order level of the thinking skills. The tasks seem to be aimed to facilitate students in comprehending what is taught and applying the knowledge given to them. One example is a group task (Appendix 3, Excerpt 2) in which students are given sample essays written by their seniors for them to read, and then, they are required to produce an essay based on one of the topics taken from the samples. The fact that the students have already been exposed to the samples before they begin writing limits their creativity when writing their own essays. However, some level of creativity is still needed as the students are required to produce an essay titled "My favorite person" (Appendix 3, Excerpt 2). Besides creativity, students are also required to utilize their thinking skills at the application level, since they have to produce the essay based on the knowledge gained from the teacher and the sample essays. This task also requires the students to exchange the essays upon completion for peer marking. As they are required to identify mistakes on the exchanged essays, thinking skills at the analysis level is needed here for them to identify the problems.

In conclusion, there are lower order thinking involved in the question types and tasks given to students. This is clearly shown in Tables 5 and 6, in which the lower order thinking skills involved are mainly at the knowledge and application level, while the higher order thinking skills involved are only at the analysis and synthesis level. The other higher order thinking domains, namely the evaluation and the affective domains, are non-existent in the classroom scene of BEL 120.

Teachers should be made aware that it is important to elicit higher order questions and tasks in the classrooms. To create this awareness, the infusion of thinking skills should be fully carried out at the planning stage of this programme in order to provide the necessary guidelines for the teachers to carry out at the implementation stage.

Interview

The interview was conducted on a lecturer who is teaching Basic English Language class (BEL 120). When asked whether she is aware of the teaching of the thinking skills, the interviewee revealed her knowledge of thinking skills. Even though she is aware of the different theories of thinking skills, she is most familiar with the Bloom's Taxonomy, and she feels that it serves as the best guideline for Malaysian students. She believes that thinking skills should be taught according to the level and ability of the students. She claims that when she teaches BEL 120, the thinking skills involved are very basic, but then, the analysis using the COGAFF Taxonomy and the Mental Operation Questions reveals that the

students are more exposed to the higher-order thinking skills than the lower order thinking skills in her classrooms.

According to the frequency descriptors that are shown in Table 7, the higher order thinking skills that are found in the questions and tasks mentioned by the interviewee are calculated at 65% according to the analysis by COGAFF Taxonomy and 61% by the Mental Operation Questions.

The numbers in Tables 8 and 9 also demonstrate that most of the higher order thinking questions and tasks come under the application and analysis levels of the COGAFF Taxonomy or the Empirical category of the Mental Operation Questions. Some examples of these kinds of questions and tasks are listing out verbs relating to Night Market, developing sentences from the verbs that are listed, and then adding in link words to the sentences to form a paragraph (Appendix 4, Excerpt 1).Very few questions and tasks fall under the other levels of the higher order thinking skills. The affective skill, which is the highest level of thinking skills in the COGAFF Taxonomy, is totally neglected. The interviewee avoids getting students to be involved with their emotions, because she feels it would be insensitive to those who have experienced some tragedy in their lives. Therefore, for example in writing, she deals with topics that are related with "hand phone, about holidays, about my room that would be the normal topic for them" (Appendix 4, Excerpt 2). Besides the writing skills, higher order thinking skills are also introduced to the students in speaking. One example comes under the synthesis level of COGAFF Taxonomy or productive category of the Mental Operation Questions:

> *I will ask them, "is your...for example...next week is your...your mum's birthday. You are all siblings. Now, you sit down and discuss what's the best...what is the best gift for you to buy for your mum," and then you give them a few choices, for example, a handbag, a voucher, and then they will discuss. It is something, which is very much related to them.*
> *(Appendix 4, Excerpt 3)*

Even though most questions and tasks fall under the higher order thinking skills, it is also mentioned by the interviewee that students are allowed to memorize language expressions that are used in certain situations in speaking, and recall information on grammar in the classroom learning. Therefore, the process of lower order thinking skills such as memorizing and recalling are also encouraged by the interviewee in her classroom instruction.

From the interview, it is found that the interviewee feels that she needs short courses to refresh her memory on the topic of teaching thinking skills. Thus, in creating more awareness in thinking skills, teachers should be given extra training in order to enhance their ability in the actual practice of teaching thinking skills in the classroom. Considering that thinking skills is included in the syllabus, it becomes the responsibility of the administrators in the educational institutions to provide teachers with the knowledge and skills that they need in implementing the teaching of thinking skills more effectively.

TABLE 7
Comparison of the levels of thinking skills utilized in the questions and tasks by interviewee 2

Level of thinking skills	COGAFF Taxonomy	Mental Operation Questions
Higher order thinking skills	65%	61%
Lower order thinking skills	35%	39%

TABLE 8
Levels of thinking skills utilized in the questions and tasks by interviewee (COGAFF Taxonomy)

Categories of questions COGAFF Taxonomy	Total number of questions and tasks	Total number and percentage of lower and higher order thinking skills
Affective	1	15 (65%)
Evaluative	1	
Synthesis	2	
Analysis	4	
Application	7	
Comprehension	0	8 (35%)
Knowledge	8	

TABLE 9
Levels of thinking skills utilized in the questions and tasks by interviewee (Mental Operation Questions)

Categories of questions		Total number of questions and tasks	Total number and percentage of lower and higher order thinking skills
Mental Operation Questions	Bloom's Taxonomy		
Factual	Knowledge & comprehension	9	9 (39%)
Empirical	Application & analysis	10	14 (61%)
Productive	Synthesis	2	
Evaluative	Evaluation	2	

The Assessment Stage

The evaluation at this level is carried out to determine the degree of thinking skills infused in the questions posed in the assessment for students in BEL 120. The questions are selected from three sets of the written final exam papers. Here, the questions are divided into three sections. Section A involves the testing of grammar, Section B is on reading and finally, Section C deals with writing. The written paper carries 60 marks in which 20 marks is awarded to each section.

In the three sets of the question papers, the analysis on Section A (Tables 10 & 11) reveals that the questions included are of both lower order (50%) and higher order thinking level (50%). The section tests mainly on the parts of speech and tenses, and consists of three sets of questions. All the questions allow students to utilize their thinking skills only at the knowledge and application level as the questions (Appendix 2, Sample C & D) requires students to underline the correct word out of three choices given in the bracket; and to "write the correct form of the verbs given in the brackets." These questions could be upgraded into higher order thinking levels by formulating them into cloze questions.

Compared to Section A of the BEL 120 paper, which gives equal emphasis to both lower and higher order thinking skills, Section B (Reading Comprehension) is found to have put more emphasis on the lower order thinking skills.

The frequency of descriptors in Table 9 and 10 reveals that the lower order thinking skills that are found in the questions are calculated at 79% according to the analysis by COGAFF Taxonomy and 100% by the Mental Operation Questions. The questions consist of true-false items and open-ended questions based on a given passage; and vocabulary testing consists of questions such as providing answers to words and phrases refer to in the passage (Appendix 5, Sample A) and finding the meaning of certain words through multiple choice questions (Appendix 5, Sample B). The types of questions included in this section does not challenge the students into using any of the higher order thinking skills except to test their comprehension level, which falls under the factual category of the Mental Operation Questions. Instead, students should be allowed to infer from the passage, or write a sentence using the words selected from the passage, in order to encourage the utilization of higher order thinking skills.

TABLE 10
Frequency of descriptors in the evaluation of the assessment stage for BEL 120 according to sections (COGAFF Taxonomy)

Level / Taxonomy		Section A (Grammar)				Section B (Reading)				Section C (Writing)				Total average of frequency
		Apr 07	Oct 06	Apr 06		Apr 07	Oct 06	Apr 06		Apr 07	Oct 06	Apr 06		
7	Affective	0	0	0	50%	0	0	0	21%	0	0	0	63%	45%
6	Evaluation	0	0	0		0	0	0		0	0	0		
5	Synthesis	0	0	0		0	0	0		1	1	1		
4	Analysis	0	0	0		0	0	0		0	0	0		
3	Application	3	3	3		2	1	1		1	0	1		
2	Comprehension	0	0	0	50%	5	4	5	79%	0	1	0	37%	55%
1	Knowledge	3	3	3		1	0	0		0	1	1		

TABLE 11
Frequency of descriptors in the evaluation of the assessment stage for BEL 120 according to sections (Mental Operation Questions)

Level / Categories of questions		Section A (Grammar)				Section B (Reading)				Section C (Writing)				Total average of frequency
		Apr 07	Oct 06	Apr 06		Apr 07	Oct 06	Apr 06		Apr 07	Oct 06	Apr 06		
1	Factual	3	3	3	50%	8	9	9	100%	1	1	1	33%	61%
2	Empirical	3	3	3	50%	0	0	0	0%	1	1	1	67%	39%
3	Productive	0	0	0		0	0	0		1	1	1		
4	Evaluation	0	0	0		0	0	0		0	0	0		

On the other hand, the writing part that falls under Section C includes both lower and higher order thinking skills. However, according to Table 10 and 11 that portrays the analysis by COGAFF Taxonomy and the Mental Operation Questions, about one-third of the questions analyzed fall under the lower order thinking skills, whereas the other two thirds fall under the higher order thinking skills. In this section, there is only one question that requires students to write an essay based on the situation given and points provided (Appendix 5, Sample C). Even though the students are given the main points to the situation to assist them in their writing, they are able to utilize their thinking at the synthesis level, which ask students to be creative by putting a number of ideas or objects together in a way that is unique and new to them (COGAFF Taxonomy, 1998). In addition, the students also needs to utilize their thinking at the knowledge and comprehension level in order to understand the information and expand the points given to them, as well as include new ideas when necessary.

Overall, greater priority has to be given to the inclusion of higher order thinking level in the formulation of questions at the assessment level. Of course, the move to do so can only be carried out if the infusion of thinking skills at all levels becomes a reality at the planning and implementation stages of the instructional development. The changes will help students to move away from the learning culture of memorizing exam techniques in schools to a thinking society that can help them to become more independent and better equipped in facing future challenges.

CONCLUSION

The evaluation of the English language subject at the tertiary level has shown that elements of thinking skills are visible, and the presence of thinking skills is evident in the English language instruction at the tertiary level. However, more emphasis is given to the teaching of lower order thinking skills than higher order. This is evident in *Fig. 1*, which shows that even though elements of higher order thinking skills are visible, emphasis is given more to the inclusion of lower order thinking skills in all the areas of the instructional development stages, except in the interview. Here, it is revealed that the teachers' question types and tasks in their teaching consist of more elements of the higher order thinking skills, and yet, the analysis carried out in the classroom reveals that these elements are not found to be dominant in the actual teaching. This evident show that even though it is claimed in the interview that thinking skills is utilized at a higher level, it is not demonstrated in actual teaching practice in the classroom.

Another inconsistency found in the evaluation of the teaching of thinking skills in BEL 120 is between the curriculum and other areas of the instructional development stages. The curriculum is considered as a plan for teaching and learning (Wiles and Bond, 1998), and it provides a guideline to the kinds of implementation carried out in the programme (Chen, 2004). However, the frequency of higher order thinking skills found in the curriculum is not at par with the frequency found in the teaching materials, classroom scenarios, interviews, and the exam question papers. There seems to be a loss of translation from the syllabus to the actual teaching, and teachers may not be solely be influenced by the syllabus when they teach.

The analysis on the curriculum also reveals that the levels of higher order thinking skills that are included in the teaching are mainly at the application, analysis and synthesis levels, with a touch of evaluation and none of the affective level. These two highest levels of higher order thinking skills are not given enough attention across the instructional development, and therefore deprive students from utilizing their thinking skills to the maximum.

In Malaysia, the education system is designed to complement with the National Education Blueprint (2006-2010), and therefore thinking skills can be considered as one of the important elements to be included in the instructional development as part of fulfilling its vision in preparing individuals to have first-class

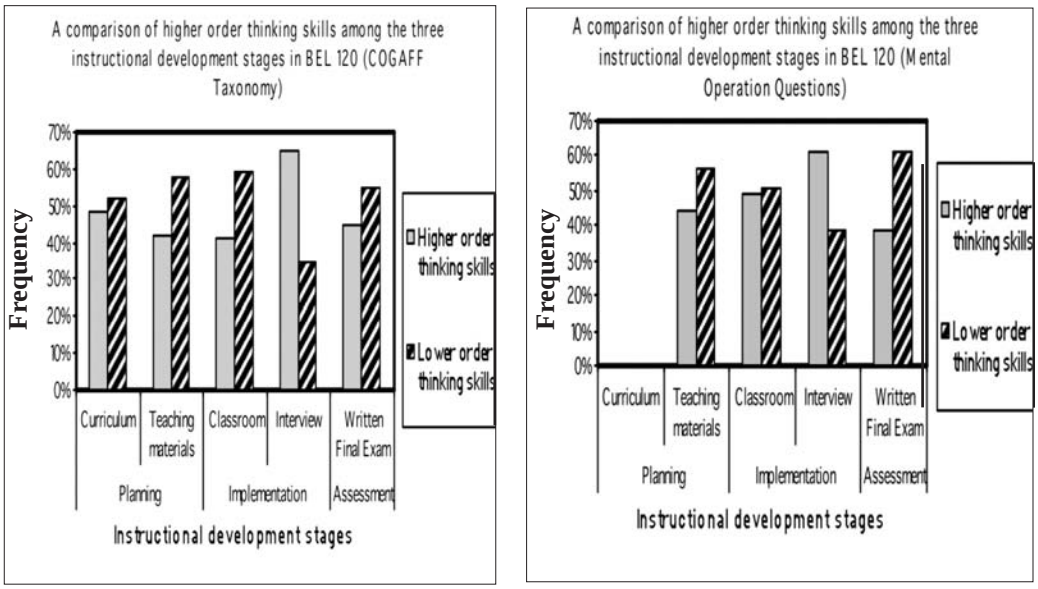

Fig. 1: Comparison of levels of thinking skills across the 3 stages of BEL 120

mindset who are knowledgeable, competitive, has a high performance culture, integrity, and strong moral values. It is imperative, then, to have a continuity of the inclusion of thinking skills from schools to the tertiary level in order to fulfill the Malaysian government's vision in producing individuals who are intellectually, spiritually, emotionally, and physically balanced and harmonious, as stated in the Philosophy of Education (2006). Thinking skills, from the lower domain at the knowledge level to the higher order at the affective domain, should be included in the instructional development at a the planning, implementation, and assessment stages of the English language subjects at the tertiary level. The synchronization in the infusion of thinking skills at all three levels of the instructional process will produce quality instruction and in turn, contribute to the success of a programme at the tertiary level. With this scenario, only then programmes in the tertiary level can provide a platform for the individuals to move forward and cope with the demands of globalization.

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APPENDIX 1

COGAFF Taxonomy Checklist

NO	TAXANOMY
7.0	**Affective** Questions at this level ask students to respond with a statement of feeling, emotion, attitude, opinion, and devotion without appraisal Keyword: Feeling, emotion, opinion, attitude, devotion, spiritual
6.0	**Evaluation** Questions at this level ask students to use criteria to make and justify judgments about something Keyword: Judge, assess
5.0	**Synthesis** Synthesis questions ask students to be creative by putting a number of ideas or objects together in a way that is unique and new to them. There are many different solutions but no right answers. Keyword: Create
4.0	**Analysis** Questions at this level direct students to determine the part of a problem, solution or idea and show how they are related. Keyword: Why
3.0	**Application** Questions at this level require students to demonstrate the use of ideas. They must apply their knowledge and understanding to new situations and use it to solve problems. Keyword: How, solve
2.0	**Comprehension** Questions at this level require students to express ideas in their own way and demonstrate understanding of a communication, idea or object. Keyword: Understand, restate, compare
1.0	**Knowledge** Questions at this level require pupils to recall memory for previously learned facts, concepts, generalization and theories Keyword: Who, what, where, when

MENTAL OPERATION QUESTIONS CHECKLIST

Categories of questions		
Mental operations questions	Guilford's structure of the intellect	Bloom's taxonomy
Factual Student simply recalls information *Eg: "Define…"* *"Who was…"* *" What did the text say…."*	Cognitive/ memory	Knowledge/ Comprehension
Empirical Student integrates and analyzes given or recalled information. *Eg: "Compare…"* *"Explain in your own words…"* *"Calculate the…."* *"Based on the text,..	Convergent thinking	Application/ Analysis
Productive Student thinks creatively and imaginatively and produces unique ideas or responses. *Eg: "What will life be like…"* *"What's a good name for…"* *"How could we …"* *"What are some possible solutions…?*	Divergent thinking	Synthesis
Evaluative Student makes judgments or expresses values. *Eg: " Which is best?"* *" Why do you favor this…."* *" How would you rate…?"*	Evaluative thinking	Evaluation

APPENDIX 2

Sample A

Sample B

Sample C

PART A: GRAMMAR (25 MARKS)

QUESTION 1

Underline the correct word in the brackets. The first one has been done for you.

What are fairy tales? According to experts, fairy tales are stories **0) (<u>which</u>, what, who)** have been handed down from person to person for generations. Therefore, one of the most **a) (significantly, significance, significant)** features of fairy tales is that they belong to an entire culture rather than to **b) (a, the, an)** individual. For this reason, fairy tales give us many insights into the cultures **c) (from, for, to)** which they come. These stories have become an oral tradition as **d) (them, their, they)** have been told over and over again.

The **e) (character, characters, characteristics)** in the fairy tales tend to be somewhat one-dimensional and stereotypical. For example, there is always an *evil old man* or a *wise young woman*. However, extraordinary things happen to them. What makes these stories even more interesting is that **f) (there, their, theirs)** themes are universal and timeless.

Today, **g) (when, whom, where)** asked to name some writers of fairy tales, most people would answer *the Grimm Brothers* or perhaps *Hans Christian Andersen*. Yet throughout history, fairy tales have been **h) (woman, women, women's)** stories, passed down orally by mothers and grandmothers. The Grimm Brothers and others merely collected the tales from **i) (these, this, that)** women and adapted the stories to suit their audience.

The best known fairy tale, Cinderella, has over 340 versions. These **j) (difference, different, differ)** versions of the story end in various ways. Charles Perrault's version is perhaps the one that has been adopted most **k) (wide, wider, widely)**. It ends on a happy note, with Cinderella forgiving her stepmother **l) (also, and, but)** stepsisters. However, in the Grimm Brothers' version, there are more graphic details. For example, when the stepsisters try on the glass slipper and find that it does not fit them, they cut off their toes to make the slipper fit **m) (properly, proper, propriety)**. Rossini uses a bracelet instead of a glass slipper in his tale, and the Disney version incorporates subplots involving **n) (talked, talk, talking)** animals that live in the house with Cinderella.

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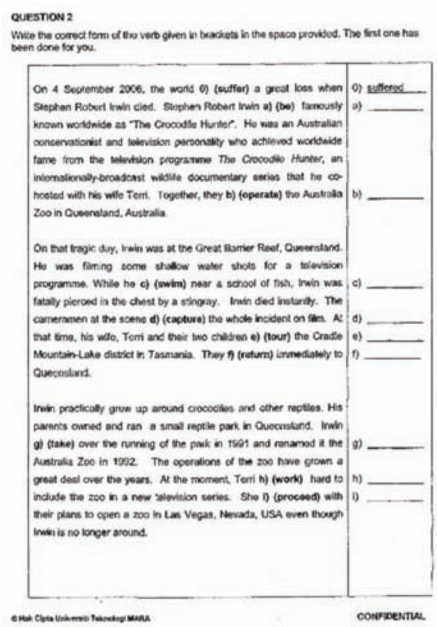
Sample D



QUESTION 2

Write the correct form of the verb given in brackets in the space provided. The first one has been done for you.

On 4 September 2006, the world **0) (suffer)** a great loss when Stephen Robert Irwin died. Stephen Robert Irwin **a) (be)** famously known worldwide as "The Crocodile Hunter". He was an Australian conservationist and television personality who achieved worldwide fame from the television programme *The Crocodile Hunter*, an internationally-broadcast wildlife documentary series that he co-hosted with his wife Terri. Together, they **b) (operate)** the Australia Zoo in Queensland, Australia.

On that tragic day, Irwin was at the Great Barrier Reef, Queensland. He was filming some shallow water shots for a television programme. While he **c) (swim)** near a school of fish, Irwin was fatally pierced in the chest by a stingray. Irwin died instantly. The cameramen at the scene **d) (capture)** the whole incident on film. At that time, his wife, Terri and their two children **e) (tour)** the Cradle Mountain-Lake district in Tasmania. They **f) (return)** immediately to Queensland.

Irwin practically grow up around crocodiles and other reptiles. His parents owned and ran a small reptile park in Queensland. Irwin **g) (take)** over the running of the park in 1991 and renamed it the Australia Zoo in 1992. The operations of the zoo have grown a great deal over the years. At the moment, Terri **h) (work)** hard to include the zoo in a new television series. She **i) (proceed)** with their plans to open a zoo in Las Vegas, Nevada, USA even though Irwin is no longer around.

0) <u>suffered</u>
a) ________
b) ________
c) ________
d) ________
e) ________
f) ________
g) ________
h) ________
i) ________

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APPENDIX 3

EXCERPTS FROM TAPESCRIPT

CLASSROOM AUDIO RECORDING (LESSON 1)

Excerpt 1

FS: Yes... Now, for example I give you a topic sentence as simple like this. For example, reading is important for... what? Student ? Now, this is the topic sentence. Now, when you write a topic sentence, you have to write everything. You have re-write the first paragraph, your introduction paragraph. Reading is important for students. That would be your topic sentence. Now, in order to tell more, to elaborate this one. To get more ideas to this one, you have other small ideas, right?

(Students response)

FS: Okay, this supporting ideas, are called supporting details. It is not support, its supporting. Now, whatever you tell here will give you more ideas to make you... to enable you to understanding the topic sentence. Now, ***can you give me the supporting detail for why reading is important for students? Now, if I say reading is important for students, what is the big question that you have in your mind?***

(Students response)

FS: Benefit of reading? I'm asking about question. The big question..

(Students response)

FS: Very good! So, if i say reading is very important for student, it is already written at the back of your head, a big one . . . WHY! Some of you are very smart; they are talking about the benefits of reading. Very good. But some students they are quite slow and then they sometimes can be smarter they say in a long sentence. They say... WHY? ***Why is reading important? Do you think that reading is important?***

(Students response)

FS: Do you read a lot? No?

(Students response)

Excerpt 2

FS: Now, I'm going to let you read some of the samples but make sure you return the papers to me. Don't take it now.

FS: Now the length of the essays is more or less like 200 words. Take one each, i hope i have enough. Please return them to me. You read first then I'm going to ask you to ask you to write something that is very simple. ***You can write in groups, okay. If it is not enough you can always share with your friends. You have more? Enough? I'm giving you more on "My Favourite Person". It can be your mother; it can be grandfather and so on.***

FS: Please return them to me. Do you have enough? Anymore? Have you had enough? Anymore? This is one they did well? Who else haven't got this one yet? Please come and get them... and then after reading yours, you can always exchange with your friends. Don't write anything. You've got to return them to me. Yes, while you are reading, I would like you to write down your full name plus your hand phone number and UiTM number. Because this is for reference regarding your 'Just English' magazine. Can somebody spare me a sheet of paper? Yes...write down there columns. One for name, your IC and your phone number because for 'Just English', there will be three issues. There are going to give you, one issue first and the next two would be given later. That's why they need the names and the phone number especially. Bow many are they in your class? 27?

(Students response)

APPENDIX 4

EXCERPTS FROM TAPESCRIPT (INTERVIEW)

Excerpt 1

FY: …Ok, when you talk about verbs, you have to know. It is very bad for you to know only the base form. You have to know at least the past form and the past participle. All this will help you in your writing." When I give them a certain…for example, "ok, we're going to do writing. Would you like to do writing? Writing is very boring. No, it's not boring if you know how to do it, " I told them. And then, ok, now, let's look at…let me give you one situation. ***For example, you are in the night market. Have you been to the night market before? We have one…very big one in Jengka. So, they say 'yes…yes.' Ok, now I would like you to take out a piece of paper and list down all the verbs that are related to the night market. What you see, what you can feel there, you just list them down." So, they will just list, and then, I will tell them to develop sentences. From there, for example, "now, when you use present tense…when you go to the night market, y'know, what kind of tense do you normally relate to? All is present tense. Now, when you use present tense, you must make sure that you know you can use present tense. You can use present continuous tense, as well as future tense." This is how I build, from the very simple on. And then, they start writing. And then, I will ask them to write only 5 sentences, because I am not very ambitious with them for the first time. I ask them to write five sentences about the situation there, the night market. And then I will ask them to come one by one, or I just project using the OHP and so on.*** I point out that the…actually I'm…I was trying to connect their mistake, but I'm not the kind of…I'm not the kind to do it on my own, when I check their work, it is always in the classroom. It's pair work or group work. All of them will be around me. …

Excerpt 2

FY: Normally, when I teach…if I know…the first time I see my students, I would ask to … right…for example…whether I'm teaching reading, speaking or listening, or other …for other subjects as well, not only for 120, I would always ask them to come up with an essay, a very short essay about themselves…like 'myself'. From that essay, I have a rough idea of what the students…normally they are very sincere. Young students are very sincere; especially BEL 120, y'know, and they would talk about anything about themselves. If I know I have orphans from my class, I would not ask them to write anything related to family or my beloved mother or y'know, like the person I like a lot. I would never ask them. I'll try my best to hinder asking that question. ***So, I'll be dealing more about hand phone, about holidays, about my room that would be the normal topic for them. I will always …because I believe that if students do not feel comfortable in your class, having to do things that they don't like, there'll be no learning.*** It is always …when they are relaxed, then only I start my teaching. I'll always ask them, "are we ready to roll?" Then I would start. If I see students still fumbling with their textbooks, looking at their pencil cases, I would not start my lessons. So, that's it.

Excerpt 3

FY: For BEL120, for example, for BEL 120, they are not assigned, …for example, they don't have individual task, y'know. They only have group discussion***. For example, I will ask them, "is your…for example…next week is your…your mum's birthday. You are all siblings. Now, you sit down and discuss what's the best…what is the best gift for you to buy for your mum," and then you give them a few choices, for example, a handbag, a voucher, and then they will discuss.*** It is something, which is very much related to them, and then, maybe, they have gone to so many places. You just give them…"ok, what are the interesting places that you have visited? List them down. Which is the best; whether it is a resort, whether it is a beach resort, higher level resort and so on.

APPENDIX 5

Sample A

IV Women are also beginning to take legal action against their abusive husbands. A salesclerk in Beijing said that after getting married, she and her husband often **argued** over everything. Then last summer, her husband beat her up, damaging her eardrum and breaking several ribs. She made a police report and subsequently asked for a divorce. Because her husband **confessed** to beating her up, the court quickly granted her a divorce.

V In the past, most women in China did not leave their abusive husbands. Very often, the abusive husband would get away easily with his crimes because the police would only ask him to sign a written agreement stating that he would never beat his wife again. It was also difficult for women to get a fair hearing in the courts. Nowadays, however, the courts are being increasingly fair to abused women. They are **frequently** given protection from their abusive husbands and even allowed to divorce their husbands. This is a big change in China and the women can be thankful that the government is at last supporting the rights of abused women.

Adapted from **Newsweek**, January 2003

QUESTION 1

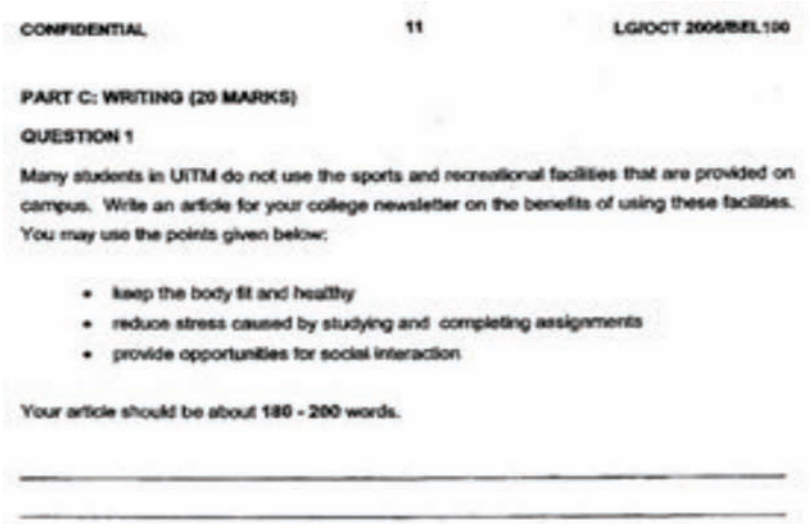
What do the following words and phrases refer to in the passage?

a) its (line 12) : _____
b) a family matter (line 15) : _____
c) They (line 19) : _____
d) which (line 23) : _____
e) she (line 28) : _____

(2½ marks)

Sample B

Sample C



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PART C: WRITING (20 MARKS)

QUESTION 1

Many students in UiTM do not use the sports and recreational facilities that are provided on campus. Write an article for your college newsletter on the benefits of using these facilities. You may use the points given below:

- keep the body fit and healthy
- reduce stress caused by studying and completing assignments
- provide opportunities for social interaction

Your article should be about **180 - 200** words.