THE COGNITIVE THINKING LEVELS CALLED FOR BY THE INSTRUCTIONS IN THE COURSEBOOK *GLOBAL* B1

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Abstract

Nowadays, many ELT teachers, educators and other subject teachers are aware of the need to integrate 21st century skills, especially critical thinking, in their lessons. Thinking practices can encourage students in their participation in classroom activities and help them survive in the challenging world. Therefore, the present study was carried out with the purpose of evaluating the extent of thinking skills that the instructions in the English coursebook call for. The study investigated the levels of thinking skill called for by instructions in the coursebook*globalB1*. The instructions in the coursebook were gathered, analysed and categorized according to the cognitive domain of Bloom's Revised Taxonomy (2001). The results of the study showed that 63.95 % of 860 instructions called for lower level thinking, whereas 36.05% of them demanded higher level thinking skills. The results of the study implied that if ELT teachers wish to promote students' thinking skills and to help them survive in the challenging world, they need to incorporate thought-provoking tasks into their lessons.

Keywords: thinking skills, Bloom's Revised Taxonomy, *global* B1

Introduction

Background of the Study

The 21st century is usually defined as "the knowledge age" and as "the century of competition", and therefore people need not only to be literate and numerate but also well developed thinking skills to survive in the rapidly changing world (Trilling & Fadel, 2012). Wagner (2008) asserts that knowledge, an outcome of education, is no longer believed to be sufficient to effectively cope with the challenges in the world. Nowadays, people all over the world encounter stiff competition in their search for jobs with better salaries and prospects. Therefore, it is vital for students to be equipped with 21st century skills including critical thinking skills in their classrooms for their survival among challenges and competition (Myo Myint, 2016). Hence, he suggests that higher education institutions must serve as "apex of knowledge creation and manipulation" so that graduates are well-prepared for the competitive and continually changing 21st century world.

In ELT classes in Myanmar, all four skills: listening, speaking, reading, and writing are integrated to develop communicative practices. However, teaching and learning a language for its own sake is not enough for students and they need to learn a language in order to develop and apply their thinking skills in situations that go beyond the language classroom (Myo Myint & Poe Poe, 2003). Richards (2006) suggests that language should serve as a means of developing higher order thinking skills, also known as critical and creative thinking. Therefore, teachers should help students develop their language skills as well as their thinking skills in ELT classes.

In any teaching-learning situations, there are three variables: teacher, student and coursebook, particularly in English as a Foreign Language (EFL) and English as Second Language (ESL) contexts (Richards, 2006). Edward and Bowman (1996) state that course- books

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are useful for teaching and learning instructions especially for countries where English is used as a foreign language. They also indicate that questions are vital components of the coursebooks as they aim at creating an interest in the subject. Ashner (1961) suggests that questioning is one of the basic ways by which the teacher stimulates student thinking and learning. Questions or instructions can be ranked according to the level of thought required for following it and/or performing a language task, for instance, low cognitive or high cognitive, convergent or divergent questions or instructions (Winne,1979).

In Myanmar ELT context, locally produced coursebooks were usually used in previous decades (Myo Myint & Poe Poe, 2003). In 2012, for the purpose of developing ELT material, international coursebooks were introduced: *global* series, the version used in Myanmar was prescribed for English Specialization undergraduate students and English for Professional Purposes undergraduate students while *Straightforward* series, the Myanmar version, for Arts and Science undergraduate students (non-English Specialization) in Myanmar.

According to Muijs and Reynolds (2011), "It is important to ask higher-level questions whenever possible to help develop students' thinking skills". Consequently, the analysis and evaluation of the questions or instructions used in ELT classes and instructions of activities in coursebooks need to be considered for the sake of curriculum review and development.

Therefore, the instructions in the coursebook *global* B1wereanalysed to identify the cognitive categories addressed by the instructions and to find out limitations of the coursebook*global*B1 in terms of cognitive demand.

The present research was conducted to find out the answers to the questions:

(a) What levels of cognitive thinking skills do the instructions in the coursebook *global* B1 call for?

(b) Which particular cognitive level is most frequently called for by the instructions of the coursebook?

Literature Review

There are different existing frameworks and criteria for coursebook evaluation in terms of cognitive process. Bloom’s Revised Taxonomy (BRT) can be a good choice to assess the basic skills, aligning teaching materials with the thinking skills (Krathwohl, 2002). Bloom’s Revised Taxonomy is a practical tool for course evaluation (Marzano & Kendall, 2007).Hanna (2007) also points out that the Bloom’s Revised Taxonomy “aligns learning objectives, curriculum, and assessment to link the complexity of learning with the cognitive domains” (p.9). Trilling and Fadel (2012) also assert that "the most common hierarchy in ranking cognitive level of questions" is Bloom’s Taxonomy (1956) or Bloom’s Revised Taxonomy (2001). They also suggest that Bloom's Taxonomy or Bloom's Revised Taxonomy is a famous model for questions or instructions that demand for active learning approaches, core knowledge and thinking process.

Moreover, Nilson (2010) suggests teachers to use Bloom's Taxonomy or Bloom's Revised Taxonomy to frame their question design so that they appropriately scaffold questions starting with basic knowledge (remembering facts) to more advanced skills such as understanding, applying, analyzing, evaluating and creating.

Bloom's Revised Taxonomy (2001) identifies levels of cognitive learning arranged from lower-order to higher-order levels of thinking as can be seen in Table 1. The cognitive domain highlights intellectual outcomes and is further divided into six specific categories or levels: Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating. Bloom's Revised Taxonomy introduces the levels of thinking in a hierarchical order. Each of the level builds in complexity from the previous level.

Anderson and Krathwohl (2001) typify the three top levels (Analysing, Evaluating, and Creating) of Bloom's Revised Taxonomy as Higher-Order Thinking Skills (HOTS) and the other three levels (remembering, understanding, and applying) as Lower-Order Thinking Skills (LOTS) that can be seen in Table 1. According to Krathwohl (2002), students are required to know, memorize, repeat and list information at the lowest level and they have to judge, criticize, resolve, invent, and make recommendations at the higher levels.

Table 1 Bloom's Revised Taxonomy (Thinking Skills: LOTS & HOTS)

Skills	Sample Prompts	Purpose	Level
Remembering	recognize, list, describe, identify, retrieve, name	Memorize and recall facts	**LOWER ORDER THINKING LEVEL**
Understanding	describe,explain, estimate, predict	Understand and interpret meaning	
Applying	implement, carry out, use, apply, show, solve	Apply knowledge to new situations	
Analyzing	compare, organize, site differences, deconstruct	Break down or examine information	**HIGHER ORDER THINKING LEVEL**
Evaluating	check, critique, judge, hypothese, conclude, explain	Judge or decide according to a set of criteria	
Creating	design, construct, plan, produce	Combine elements into a new pattern or product or structure	

According to my literature survey:

(a) Al-Btoush (2012) analysed the questions in the English language textbooks used in Jordan during the academic year 2011-2012, according to Bloom's Taxonomy (1956).

(b) Ali Roohnani, Farzaneh Taheri & Marziyeh Poorzangeneh (2014) analysed the questions in two ELT coursebooks: *Four Corners Level 2* and *Four Corners Level 3*, according to Bloom's Revised Taxonomy (2001).

(c) Gholamreza Zareian, & Mohammad Davoudi (2015) analysed the questions in two ESP coursebooks: *English for the Students of Sciences* and *English for the Students of Engineering* taught in Iranian universities, using Bloom's Revised Taxonomy (2001).

(d) Khine Myat Thwe Aung (2015) analysed the questions in *Grade 11 English Textbook (2010)* using Bloom's Revised Taxonomy (2001).

Materials and Method

In the present research, the instructions in the coursebook *global* B1were analysed in accordance with the six levels of cognitive domain, Bloom's Revised Taxonomy (Anderson & Krathwohl, 2001). The coursebook was designed by Lindsay Clandfield and Rebecca Robb Benne(2012). Clandfield (2012) claims that all the tasks in the coursebook are related to each other, and the they are thought-provoking. Thus, this study was carried out in order to find out whether the instructions in this coursebook are really thought-provoking or not.

The qualitative method was employed to analyse and evaluate the levels of thinking that the instructions or questions called for and the quantitative method was employed to determine the frequencies and percentages of the thinking levels students need in doing language tasks. In analysing and classifying the instructions in the coursebook, the instruction that requires the students to do an activity was considered as a unit of analysis. It was often found that instructions comprisemultiple cognitive skill levels. However, in this study, only the highest levels of thinking that students need for the activities were taken into account in collecting the data.

The data for this study was collected in two stages. In the first stage, all the instructions from the coursebook were gathered. In the second stage, the 860 instructions gathered were classified into levels of cognitive domain of Bloom's Revised Taxonomy (2001). The number of instructions that called for different levels of thinking in all the ten units of the coursebook was worked out.

Findings

The study revealed that instructions in the coursebook *global* B1 demand all levels of cognitive process. Table 2 gives the frequencies and percentages of cognitive levels students have to use in doing the tasks in the coursebook. The results also showed that the *applying* level of thinking was called for the most and the *creating* level of thinking was called for the least by the instructions of the tasks.

Table 2 Frequency and Percentage of cognitive process levels of instructions in each unit of the *coursebook global* B1

Unit	Levels of Thinking in doing activities												No. of Instructions
	Remembering		Understanding		Applying		Analysing		Evaluating		Creating		
	frequency	%	frequency	%	frequency	%	frequency	%	frequency	%	frequency	%	
1	19	21.9	19	21.59	22	25	13	14.77	15	17.05	0	0	88
2	19	19.19	18	18.18	27	27.28	15	15.15	19	19.19	1	1.01	99
3	13	13.98	22	23.65	27	29.03	9	9.68	19	20.43	3	3.23	93
4	11	11.83	18	19.35	20	21.51	18	19.35	19	20.43	7	7.53	93
5	8	10.96	20	27.4	20	27.4	10	13.7	14	19.17	1	1.37	73
6	13	15.66	23	27.71	25	30.12	6	7.23	14	16.87	2	2.41	83
7	17	19.54	19	21.84	22	25.29	8	9.19	20	22.99	1	1.15	87
8	8	9.76	18	21.95	26	31.71	11	13.41	18	21.95	1	1.22	82
9	5	6.94	12	16.67	22	30.56	13	18.05	18	25	2	2.78	72
10	11	12.22	19	21.11	27	30	19	21.11	14	15.56	0	0	90
Total no. of Instructions	124	14.42	188	21.86	238	**27.67**	122	14.19	170	19.77	18	**2.09**	**860 (100%)**
	LOTS → 550instructions **(63.95%)**						**HOTS → 310**instructions **(36.05%)**						

The frequencies of the instructions of the six cognitive levels range from 18 (2.09%) for *creating* to 238 (27.67%) for *applying* level. The *understanding* thinking level appears as second most frequently demanded level with a percentage of 21.86% followed by the *evaluating* level with a percentage of 19.77%. The findings also indicated that the *analysing* level gave a percentage of 14.19% which is nearly equivalent to the *remembering* level, 14.42% of total 860 instructions given in the course book. The overall finding of this study was that 550 instructions (63.95%) needed Lower Order Thinking Skills while 310 instructions (36.05%) called for Higher Order Thinking Skills as shown in Table 2.

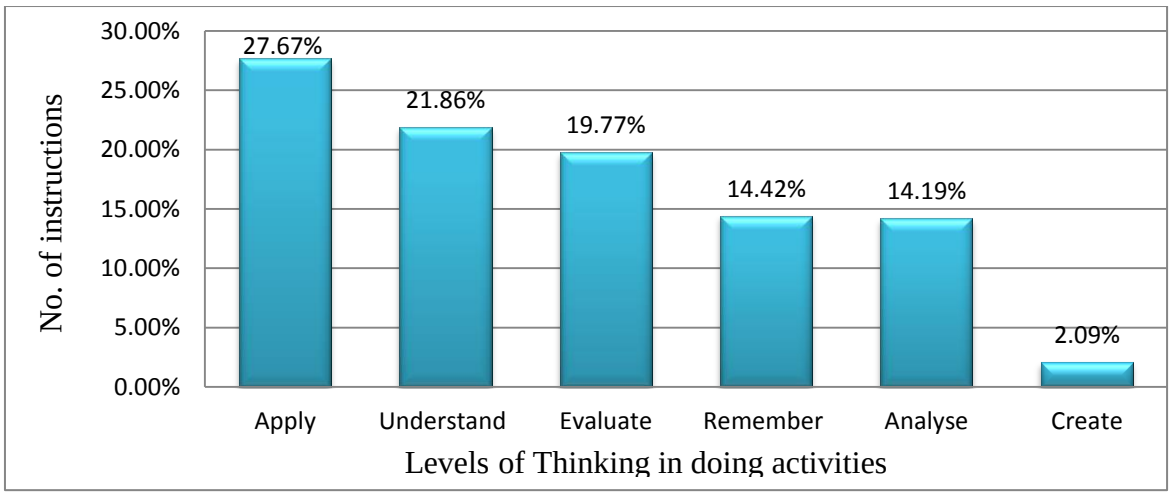

Figure 1 Percentage of each cognitive thinking level of instructions in all units of the coursebook *global B1*

As can be seen in figure 1,27.67% of instructions called for the applying thinking level and it was the highest, followed by understanding which accounts for 21.86%, evaluating 19.77%, remembering 14.42%, analyzing 14.19%, and creating 2.09% in decreasing order.

Discussion

The coursebook analysed in the present study and those analysed in the studies of Ali Roohnani, Farzaneh Taheri & MarziyehPoorzangeneh (2014) and Gholamreza Zareian, & Mohammad Davoudi (2015) were used in the tertiary level. However, Al-Btoush (2012) and Khine Myat Thwe Aung (2015) analysed the coursebooks used in the secondary level.

With respect to the research tool, Bloom's Revised Taxonomy (2001) was used in the present study and in the studies conducted by Ali Roohnani, Farzaneh Taheri & MarziyehPoorzangeneh (2014), Gholamreza Zareian, & Mohammad Davoudi (2015) and Khine Myat Thwe Aung's (2015). However, Al-Btoush's (2012) used Bloom's Taxonomy (1956) as the tool for analysis.

The findings of the previous studies showed that the questions in the coursebooks which were analysed called for more lower order thinking skills than higher order thinking skills. The results indicated that the writers of the coursebooks did not focus on developing higher order thinking skills.

The findings of the present study revealed that the instructions in the coursebook *global* B1 called for the applying thinking level the most. Therefore, it may be concluded that the focus of the coursebook writers was to motivate learners to apply the knowledge they have learnt in new contexts or in real life situations.

The second most frequent skill called for by the instructions was understanding thinking skill. The instructions provided learners practice in translating the prior knowledge they have learnt in new situations.

The third most frequent skill called for by the instructions was evaluating thinking skill. It was followed by remembering thinking skill and analyzing thinking skill. To develop evaluating thinking level of students, material developers and teachers should devise exercises which require learners to evaluate something critically and come up with better solutions.

According to the results obtained, remembering thinking level which is the basis and beginning in the thinking process, was not given as much emphasis as evaluating thinking level. This showed that the coursebook writers seemed to minimize the practice of remembering thinking skill in order to discourage rote learning or memorization.

The findings of the study showed that the instructions in the coursebook *global* B1did not seem to frequently demand analyzing thinking level. However, while students did activities that require them to use their evaluating thinking skill, they also use their analyzing thinking skill. To improve the analysing skill of students, material developers and teachers should devise questions which require learners to distinguish, for example, what is relevant and irrelevant, what is important and unimportant.

The results showed that the creative thinking skill was called for the least by the instructions in the coursebook. Therefore, material developers and teachers should give

instructions that require students to reorganize concept, ideas into new patterns or structures and to develop an alternative solution.

The instructions in the coursebook *global* B1 called for both lower order thinking skills and higher order thinking skills. It may be assumed that the coursebook writers devised more instructions that call for lower order thinking skills to help students learn certain basic information before developing higher order thinking. It may be concluded that all instructions in the coursebook *global* B1 were thought-provoking but they called for different levels of thinking.

Conclusion

The overall finding of this study was that the majority of the questions called for the lower level cognitive skills and only few questions were found to address higher cognitive processes. Therefore, it may be concluded that, the coursebook *global* B1can help students develop lower cognitive skills more than higher thinking skills. Hence, it is suggested that in order to strike a balance between lower-order questions and higher-order ones, multilevel questions and instructions provoking higher thinking skills should be devised and incorporated in the lessons in ELT classrooms.

In the light of the findings of the present study, further in-depth qualitative researches involving teachers and students are recommended. Moreover, workbooks also need to be analysed to get a comprehensive description of the extent of thinking skills the *global* series demand.

The findings of this study may offer instructors, educational administrators, syllabus designers, curriculum planners, and material developers some handy hints on the inclusion of thinking skills in the EFL materials. Teachers may also employ the findings of the study and use innovative techniques in their teaching in order to develop the thinking skills of students.

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