

THE ANALYSIS OF HIGHER ORDER THINKING SKILL IMPLEMENTATION IN ENGLISH READING TEXTBOOK FOR THE FIFTH GRADERS OF MALAYSIAN PRIMARY SCHOOL

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Abstract

Higher order thinking skill has become an interesting issue in educational terms including in Malaysia. Currently, teaching English in Malaysia is using a textbook as the main source. Reading is one of the skills which is known as a complex skill because it is well related to higher order thinking. The three higher levels of the cognitive domain in Bloom's revised taxonomy are analysis (C4), evaluation (C5), and creation (C6). The objectives of the research are to know the types and the most frequent use of higher order thinking skill found in reading essay exercises of English textbook for the fifth graders of Malaysian Primary school. The study focuses on the cognitive process of the cognitive domain in Bloom's revised taxonomy. The type of research is descriptive qualitative research. The technique of collecting data in this research is documentation technique. The writer finds that the distribution of higher order thinking skill is higher than the lower order thinking skill but it is still unequal between one domain to other domains. It needs improvement to make the distributions of the cognitive domain more balance.

Keywords – *HOTS, Bloom's revised taxonomy, Textbook analysis, Reading exercises*

Introduction

Higher order thinking skill has become an interesting issue in educational terms since many years ago. The application of higher order thinking level is much needed to develop the students thinking level. Higher order thinking enhances the students to not only focus on the explicit things but also encourage them to find a hidden meaning or content of the materials. HOTS are also involves examining assumptions and values, evaluating evidence and assessing conclusions (Petress, 2005). Thus, reading as one of the most complex skill is well related to higher-order thinking level since in reading there are much implicit information in a text. Things that can measure the level of thinking in reading skill is on the implementation of higher order thinking level in reading essay questions.

In relation to the higher order thinking skill in reading, the use of textbook as the tool of teaching-learning activities is crucial. The textbook has to contain the exercises which engage the students to think in a higher level. Thus, the textbook that contains text in reading section sometimes is not used maximally. Teacher often focuses on the vocabulary in the text that makes the students only think in a lower level because they do not know the implicit meaning or information in the text. Students need to use the higher level of thinking by learning the content of the text. Their understanding of the text can be measured by asking them to answer the reading essay question in the textbook.



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Grabe (2009: 5) states that reading is a process when readers learn something from what they read and involve it in an academic context as part of education. Thus, Airasian and Russel (2008) highlight that the only way to test higher-level thinking skills is with the essay items. In addition, they states that Essay questions provide an important tool to assess higher-level thinking. Furthermore, Musial (2009) points out that Essay questions are most effective at assessing complex learning and higher order thinking skills. Thus, it is suitable to analyze the distribution of the higher order thinking skills in the essay questions of reading exercises.

One of the most well-known taxonomies in education is Bloom's taxonomy. In addition, there is a revised version of Bloom's taxonomy which is published by Bloom's colleagues, Krathwohl in 2002. The taxonomy which provided carefully developed definition for each of the six major categories in the cognitive domain, reduce the labor of preparing the annual comprehensive examinations in different parts of the world (Krathwohl D. , 2002).

Table 1. The difference between original and revised taxonomy (Musial, Nieminen, Thomas, & Burke, 2009)

Original Taxonomy	Revised Taxonomy
Knowledge	Remember (C1) - retrieve relevant knowledge from long term memory (recognize, recall)
Comprehension	Understand (C2) – Determine the meaning of instructional messages (interpret, classify, summarize, infer, compare)
Application	Apply (C3) – use procedure in a given situation (execute, implement)
Analysis	Analyze (C4) – break material into parts and see how they related (differentiate, organize, attribute)
Synthesis	Evaluate (C5) – make judgments based on criteria and standards (check, critique)
Evaluation	Create (C6) – put elements together to form coherent whole or make an original product (generate, produce)

The cognitive domain of remember (C1), understand (C2), and Apply (C3) are called as the lower order thinking skill (LOTS) while Analyze (C4), Evaluate (C5), and Create (C6) are categorized as the higher order thinking skill (HOTS).

Here are the list of the verbs which cover the three domains of higher order thinking skill:

Table 2. List of verbs

Higher Order Thinking Skill or Bloom's revised taxonomy	Verb
Analyze (C4)	Analyze, breakdown, categories, compare, criticize, debate, differentiate, examine, identify, inspect, outline, point out, relate, summaries, etc.
Evaluate (C5)	Argue, choose, conclude, contrast, describe, diagnose, explain, justify, interpret, predict
Create (C6)	Arrange, combine, construct, design, formulate, generate, integrate, organize, produce, relate, revise, specify, write, etc.



This study aims to analyze the higher order thinking skill implementation in reading essay question of English textbook for the fifth graders of Malaysian primary school. Therefore, the writer put forward the following research questions:

1. What are the types of higher order thinking skill found in reading essay exercises of English Textbook for the fifth graders of Malaysian Primary School?
2. What is the most frequent higher order thinking skill found in reading essay exercises of English textbook for the fifth graders of Malaysian Primary School?

Methodology

In this research, the writer uses the descriptive qualitative research by using the reading essay questions of an English Textbook entitled “English Year 5” *Sekolah Kebangsaan* published by *Dewan Bahasa dan Pustaka* of Malaysian Education Ministry in 2014 as the subject of the research. The writer uses documentation technique to collect the data while the analysis uses interactive model by Miles and Huberman (1994) to analyze the data. There are three concurrent flows of activity there are involved: (1) Data Condensation, (2) Data Display, and (3) Conclusion drawing/verification (Miles, Huberman, & Saldana, 2014).

1. Data Condensation

- a) The writer reads all the text and the essay question in reading section of the textbook.
- b) The writer collects all the questions in a table.
- c) Identify type of the cognitive level based on Bloom’s revised taxonomy.

2. Data Display

In this research, the writer makes a data tabulation that covers all the analyzed data. It is displayed in table and graph, so it makes easier in drawing the conclusion.

3. Drawing and Verifying Conclusion

The final step is drawing the conclusion, the result is drawn explicitly and grounded oriented. The writer elaborates the finding in a form of thought which will be explained in a discussion section. The discussion will represent the findings. The findings are coded into “U” represent Unit and “Q” represent question so if there is a code U1Q1 it means unit 1 question 1. The conclusion is made based on the finding and the discussion.

Findings and Discussion

Findings

After being identified and analyzed the English Textbook entitled “English Year 5” *Sekolah Kebangsaan* published by *Dewan Bahasa dan Pustaka* of Malaysian Education Ministry in 2014 as the subject of the research, it can be drawn the data analysis as followed.



Table 3. The Result of Data Analysis

No	Unit (Themes)	Lower Order Thinking Skill	Higher Order Thinking Skill		
			Analyzing (C4)	Evaluating (C5)	Creating (C6)
1	Family Day	2	2	1	-
2	Saving, Spending, and Sharing	3	2	-	-
3	Superheroes	-	-	-	-
4	Malaysian Legends	1	1	1	-
5	Moving Forward	2	2	-	-
6	Self-Protection	2	1	1	-
7	The King's Decision	2	1	1	-
8	Fascinating Sabah and Sarawak	1	1	1	-
9	Space Exploration	-	-	-	-
10	The Peach Boy	-	1	-	1
11	Natural Disasters	-	2	1	1
12	Unique Buildings	2	1	1	-
13	Lost and Found	-	-	2	-
14	Adventure Sports	4	-	-	-
15	Real-life Heroes	4	5	1	1
Total : 55 Questions		23	19	10	3
Percentage		41.8%	34.5%	18.2%	5.5%
Total Percentage		41.8%	58.2%		

Discussion

The Type of Higher Order Thinking Skill

Analyzing (C4)

Analyzing (C4) is the lower level of higher order thinking skill among the others. It deals with the students capabilities to breakdown the concept or the information on the texts into parts and understand how each parts is related each other. This domain involves the critical thinking to criticize and examine the information on the text. Hence, this level is part of the higher order thinking skill.

Table 4. Sample data of analysing domain

Code	Question
U1.Q1	Who do you think can join this event?
U2.Q2	How much does the brooch cost after discount?
U4.Q2	Why is the deer used as a symbol in the Kelantan state emblem?
U5.Q4	Why are more people choosing to read e-books?
U6.Q2	Why will May Lee be staying with her grandmother?
U7.Q1	Why did King Sam need to find an heir to his throne?
U8.Q1	What is Sabah also well known?
U10.Q1	Sequence the story in the correct order!
U11.Q3	Why do you need to drop to the ground during an earthquake?
U12.Q4	Why is it shaped like an elephant?
U15.Q3	Why is it wrong to make prank calls?



As a result, it can be seen from the table result in the data analysis above which there are 19 questions among 55 questions of the reading essay exercises found in the English textbook for the fifth graders of Malaysian primary school. It shows if 34.5% of the questions presume the students to breakdown the information on the text. The students are supposed to be able to analyze the implicit information on the text.

Evaluating (C5)

Evaluating (C5) relevant to the critical thinking skill in making a decision. Somehow this level is relating the criteria and standard of social knowledge to the information on the texts. It involves the cognitive knowledge to justify the information on the texts.

Table 5. Sample data of evaluating domain

Code	Question
U1.Q5	We can get many new friends during a family day. Why?
U4.Q3	Do you think Cik Siti Wan Kembang still alive? Why?
U6.Q4	Do you think Mrs. Tan is being overprotective? Why?
U11.Q2	Do you think it is possible to prevent an earthquake? Why?
U12.Q2	What do you think the two handles of the Basket Building are made of? Why?
U13.Q1	Where do you think the socks and the cap are?
U15.Q10	Why is she remembered as a real life hero?

As a result, evaluating level consists of 10 of 55 essay questions that have been shown in the table result of data analysis. It shows 18.2% questions suppose the students to justify the information on the text. The students have to make judgement about the text by considering their social knowledge.

Creating (C6)

Creating (C6) is the highest level of the cognitive domain. It deals with the capability to put information together in an innovative way or make an original product. This is the highest quality of cognitive domain that should be acquired by learners.

Table 6. The data of creating domain

Code	Question
U10.Q2	Predict the ending of the story?
U11.Q4	How can you help the victims?
U15.Q11	List three adjective that best describe Sybil Kathigasu

As a result, the result table of data analysis shows that there are 3 of 55 reading essay questions belong to creating domain. 5.5% among the all analyzed questions suppose the students to think in the highest level. They have to design an innovative information based on the text they read.



The Most Frequent Higher Order Thinking Skill

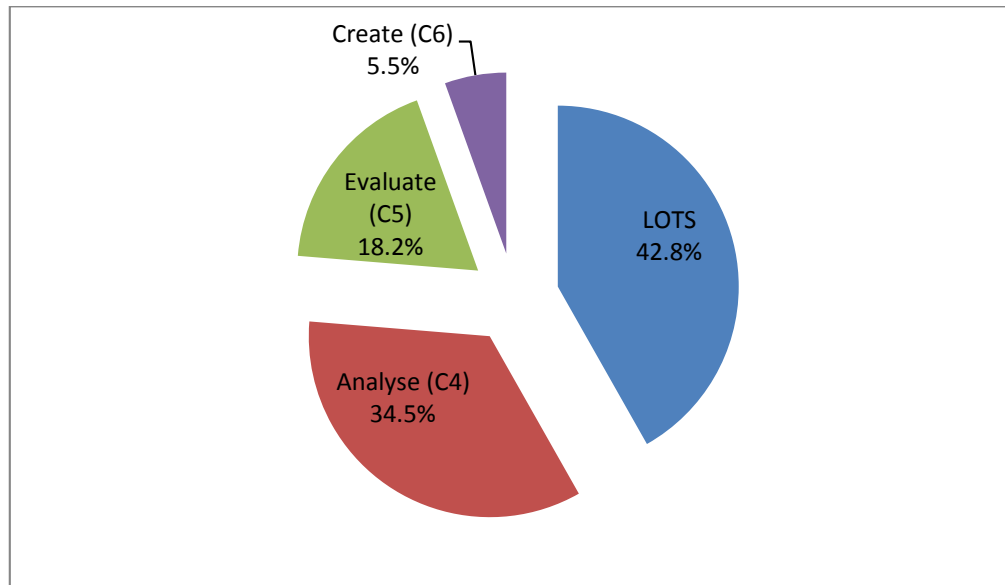


Figure 1. The distribution of HOTS in reading essay exercises

Analyzing domain is found 34.5% among all the questions. It is only 7.3% behind the lower order thinking questions which still be divided into three domains. It means that the writer facilitates the users of the textbook or the students to be able to breakdown the information into parts and understand how each part is related.

The most frequent higher order thinking skill found in reading essay question in the English textbook for the fifth graders Malaysian primary school is analyzing (C4). Analyzing domain is found 34.5% among all the questions. Hence, it shows that the textbook encourage the students to find the implicit information on the text by analyzing the explicit information which already written on the text. The question makes the students inspect the information on the text and relate each information to find the most suitable meaning of the information.

Conclusions

Based on the result and discussion, it can be concluded that:

1. Based on the data analysis, the type of higher order thinking skill in the reading essay exercises of English textbook entitled “English Year 5” with the learning standard KSSR are analyzing (C4) as the highest rank with the data found 19 questions from the whole data 55 questions. It emerged as the most frequent or 34.5%. The next rank is evaluating (C5) which consist of 10 questions or 18.2% among the whole analyzed data. The last higher order thinking skill found in reading essay exercise is creating (C6) with 3 of 55 questions or 5.5% among the analyzed data. The other questions which are not qualified as the higher order thinking skill



are 23 questions or 41.8%. it is still divided into three domains of the lower order thinking skill.

2. According to the finding on the data analysis above, the writer concluded that reading essay question in English textbook entitled “English Year 5” has the most frequent on the analyzing (C4) level and be able to make the students use the cognitive skill to breakdown the materials or information on the text into part and understand the correlation of it which should be acquired by the students according to the learning standards.

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