LOTS AND HOTS OF TEACHER-MADE TEST IN JUNIOR HIGH SCHOOL LEVEL IN KEFAMENANU

Maria Wihelmina Wisrance,

University of Timor, Indonesia, anchewelan@gmail.com

Thresia Trivict Semiun,

University of Timor, Indonesia, semiunthresia@yahoo.co.id

ABSTRACT

This study was aimed at examining the quality of teacher-made English summative test of grade VII and VIII of one of Junior High Schools in Kefamenanu. It applied the descriptive qualitative method by focusing on document analysis. The result showed that both tests given to the first and second-grade students of Junior High School of Biboki Utara are applied on 2 levels of Bloom Taxonomy Revised Theory, they are Remembering (C1) and Understanding (C2). The result of the test indicated that the tests are included in the lowest level of the cognitive domain based on Bloom Taxonomy Revised theory. Besides, certain test instructions in both test A and B needed to be paid more attention since they contain some grammatical errors.

Keywords: *HOTS; LOTS; Teacher-Made Test*

INTRODUCTION

Lately, there is a talk by education practitioners on the topic of high order thinking skills in facing the industrial era of 4.0. They believe that a curriculum aims at developing thinking skills, in general, may benefit the learner, the society and the world at large. To prepare the students in facing the era, where human compete with technology, the teachers are demanded to practice not only students' low-level thinking skills but also students' high order thinking skills. High order thinking skills (HOTS) can be defined as high-level thinking that includes three dimensions namely analyzing (C4), evaluating (C5) and creating (C6). Meanwhile, low order thinking skills (LOTS) is low-level thinking that includes remembering (C1), understanding (C2) and applying (C3) (Anderson &Krathwoh, 2001). Both HOTS and LOTS are based on level thinking skills proposed by Bloom that widely known as Bloom's Taxonomy.

HOTS questions are needed to stimulate students' critical thinking that

later can contribute to their achievement. The using of HOTS questions to stimulate the learners' thinking skills is essential to meet the challenge of the 21st century (Putra & Abdullah, 2019). This had been proved through research conducted by Purnama & Nurdianingsih (2019) who compared HOTS and LOTS in teaching speaking for the first semester students. The result revealed that HOTS instruction was more effective than LOTS instruction as viewed from students' motivation. However, for the school level, the amount of HOTS used to assess students achievement was still limited compared to LOTS. Recently, Widiyaningih & Septiana (2019) analyzed HOTS in the National Examination of English subject for Junior High School level. They concluded that the number of questions to test HOTS are lower than questions to test LOTS. The writers viewed that the implementation of HOTS in the test to stimulate students' critical thinking is still far from what is expected.

The present study focuses on the amount of HOTS and LOTS in English Summative Tests constructed by Junior High School EFL teachers in a public junior high school located in Kefamenanu. There are two tests i.e. Test A and Test B that were collected from two different EFL teachers teaching in a public junior high school not labelled with A accreditation. The tests constructed by two different English teachers, who teach grade VII and grade VIII. The tests items then were taken as the main documents. Later, the tests were named Test A and Test B. Ethical issue that would appear in the future was prevented by minimizing harm (Hammersley & Traianou, 2012). This study would not aim to harm the school and the teachers' reputation by reporting the quality of their tests. Otherwise, this study was pure as feedback for the school and the teachers particularly.

REVIEW OF RELATED LITERATURES

A test plays an important role in the teaching and learning process. It becomes a standard to determine the success of the whole learning process. As it helps teachers to measure the quality of a learning process, a test needs to be carried out well. Considering its importance in the learning process, a test conductor/developer need to be sure that the test should meet the four skills as

demanded in 21st-century education such as (1) Critical Thinking and Problem-Solving; (2) Creativity and Innovation; (3) Communication; and (4) Collaboration which are considered as Higher Order Thinking Skills (HOTS) (Pratiwi, et al, 2019). Thomas & Thorne (2009) said that HOTS is a thinking level that is more than just memorizing facts or retelling something to someone exactly the way it was told. In Bloom's Taxonomy, the cognitive processes that belong to HOTS are analysis, synthesis, and evaluation.

Bloom's taxonomy is an instrument to measure certain cognitive skills and ability within the test papers based on the specific criteria. It was first proposed in 1949 which cover *Knowledge, Comprehension, Application, Analysis, Synthesis,* and *Evaluation*. The Taxonomy then was revised in 2001 that cover *Remember (C1), Understand (C2), Apply (C3), Analyze (C4), Evaluate (C5),* and *Create (C5).* Bloom's Taxonomy consists of three parts; cognitive domain, affective domain, and psychomotor domain. One of the domains that considered as the most important domain among other domains is the cognitive domain as its ability is to actualize the knowledge from the transferred information. The cognitive domain can be referred to as the process of

information along with the development of thinking skills and abilities. The cognitive domain consists of six levels which are: LOTS and HOTS. LOTS refer to the retaining of information and the ability to recall knowledge. It is represented by the first three levels; knowledge, comprehension and application. HOTS refer to the process of thinking that is operated at the highest levels of cognitive processing (Putra & Abdulah, 2019).

Many kinds of research about HOTS and LOTS have been conducted by several researchers. Febriyani et al., (2020) in "An Analysis on Higher Order Thinking Skill (HOTS) in Compulsory English Textbook for the Twelfth Grade of Indonesian Senior High Schools" investigate the composition of higher-order thinking skills (HOTS) in language tasks of the English textbook *"Bahasa Inggris SMA/MA/SMK/MAK kelas XII Edisi revisi 2018"*; They found that the composition of Higher Order Thinking Skill (HOTS) presented in the language skill tasks are lower than the Lower Order Thinking Skill (LOTS). Further, the results showed that the most dominant cognitive dimension used in the language skill tasks of this textbook is *remembered (C1),* with 41%. Hence, they conclude that it is not

enough if the teacher just only uses the English textbook as a teaching tool to improve students HOTS ability.

Febriani et al., (2019) in their research entitled "Analysis of Reading Comprehension Questions by Using Revised Bloom's Taxonomy on Higher Order Thinking Skill (HOTS)" found out that the most dominant level in the textbook was higher-order thinking skills HOTS). It was 66.8 % of 100 % while it was 33.4 % for lower-order thinking skills (LOTS). It can be concluded that the textbook concentrated more on higher-level thinking questions than lower lever thinking.

Putra & Abdulah (2019) on their research "Higher-Order Thinking Skill

.

METHODS

In this study, the writers employed the descriptive qualitative method by focusing on document analysis. According to Donald Ary et al., (2009) "content or document analysis is a research method applied to written or visual materials to identify specified characteristics of the material. The materials analyzed can be textbooks, newspapers, web pages, speeches, television programs, advertisements, musical compositions, or

(Hots) Questions in English National Examination in Indonesia" tried to identify the use of HOTS-based questions and what particular skills appearing under HOTS category in English National Examination. The result revealed that there is an insufficient amount of HOTS questions in English National Examination. 157 items classified into the LOTS and only 53 (25.23%) items are classified into HOTS. Besides, the level of HOTS included in English National Examination 2013-2018 is only the level of Analyze. The Differentiating and Organizing are the sub-skills of the aspect of Analyze that are mostly included in all examinations.

any of a host of other types of documents" (p.457).

The data of this study are taken from the test items made by two different English teachers from grade VII and VIII. The data later was analyzed by categorizing each item in the test into the six cognitive domains of Bloom's revised taxonomy i.e. C1 (remembering), C2 (understanding), C3 (applying), C4 (analyzing), C5 (evaluating) or C6 (creating). The total of High Order

Thinking Skill (HOTS) and Low Order Thinking Skill (LOTS) test items then be calculated to see the percentage in each test. Last, the writer described the result of data analysis qualitatively.

.

RESULTS AND DISCUSSION

The finding of HOTS questions and LOTS questions of test A and test B are presented and discussed in this section. Both of the English Summative tests have 50 items that aim at testing reading, vocabulary and grammar. The tests are in the form of multiple-choice with one correct answer and three distracters in each item. The 50 items of each test later are categorized into the six cognitive domains of Bloom's Taxonomy Revised Theory. The items in test A and test B are constructed by C1 and C2 questions as presented in the following table

Table 1. Findings of HOTS and LOTS in Test A and Test B

Item	Cognitive process of dimension											
	C1		C2		C3		C4		C5		C6	
	A	B	A	B	A	B	A	B	A	B	A	B
1	X		X	X								
2	X	X										
3	X	X										
4	X	X										
5	X			X								
6	X	X										
7	X	X										
8	X			X								
9	X	X										
10	X	X										
11	X	X										

12	X	X		
13	X	X		
14	X	X		
15	X	X		
16	X	X		
17	X	X		
18	X	X		
19		X	X	
20		X	X	
21			X	X
22			X	X
23	X			X
24	X			X
25	X			X
26	X	X		
27		X	X	
28		X	X	
29		X	X	
30		X	X	
31		X	X	
32		X	X	
33		X	X	
34		X	X	
35		X	X	
36			X	X
37			X	X
38	X			X
39			X	X

No.			
40		X	X
41		X	X
42		X	X
43		X	X
44	X	X	
45		X	X
46	X	X	
47	X	X	
48	X	X	
49		X	X
50		X	X

Remembering Level (C1) of Test A and Test B

The data below are excerpts of questions that explain test items constructed by two English teachers in a Junior High School in Kefamenanu. These tests are prepared for the second-semester student; class VII and VIII in the academic year 2018/2019. Most of the test items belong to a Remembering level based on Bloom Taxonomy Revised Theory. The remembering level (C1) question is the question of which instruction is to promote retention of the presented material in much the same form in which it was taught (Mayer, 2002:228). The questions that categorized into C1 are the questions which involve retrieving relevant knowledge from long term memory or kind of recalling information. The answer to C1 questions is usually stated in the text.

Excerpts from Test A (for 7th Grade Students)

The following text is for questions (*questions) 1-5!

My lovely house

I am Selda. I live in Atambua. My house is at no 12 Jln. Merdeka west Atambua. It is not a big house. It's small. It's painted apple green. I like it anyway. It has a small garden and mango tree in front of the house. It looks green and nice.

My house has two bedrooms, a living room, a dining room, a kitchen, and a bathroom. Each of it has its own furniture and equipment. We can do many activities there.

My bedroom is in the front of the house, next to the living room. My parents' room is in the middle part of the house next to the dining room. The kitchen and the bathroom are at the back part of the house.

1) Question number 2
   Where is the writer live? (*Where does the writer live?)
   a. Atambua   b. Kupang
   c. Kefa   d. Jakarta
2) Question number 3
   How many bedrooms are in the house?
   a. One   b. Two
   c. Three   d. Four
3) Question number 4
   The house painted is…… (*The house is painted…)
   a. Black   b. Red

   c. Apple green   d. White

4) Question number 5
   Where are the bathrooms and the kitchen located?
   a. In front of the house
   b. In the dining room
   c. In the middle of the house

   d. At the back part of the house

All questions presented above are categorized into C1 because the students are instructed only to recall the information they read from the text. First, the answer to question number 2 is stated clearly in the text (first paragraph, sentence 2), "*I live in Atambua*". The answer of that question number 3 is stated in the text (second paragraph, sentence 1), "*My house has two bedrooms…….*".The

answer to question number 4 can be seen clearly in the first paragraph, on sentence 6, "*It's painted apple green*". Last, the answer for question number 5can be found explicitly in the last sentence of the text "*The kitchen and the bathroom are at the back part of the house*".

Excerpts from Test B (for 8th Grade Students)

The text is for questions no 31-33!
        Bill Christian has three pets. Their name (*names) are Catty, Doggy and Birdy. Birdy is big. Catty is bigger than Birdy, but Doggy is the biggest.
1) Question number 31
   Birdy is…
   a. bigger   b. Big
   c. biggest d. the big
2) Question number 32
   Catty is….Birdy.
   a. the bigger   b. bigger than
   c. biggest d. the biggest
3) Question number 33
   Doggy is…of them.
   a. the big   b. the biggest
   c. bigger d. bigger than

Item number 31-33 are included in the remembering level (C1) question of Bloom Taxonomy Revised theory. The answers to these questions are already stated clearly in the text. These questions are only a kind of information recalling question. First, the answer of item number 31 is stated in the text on sentence 3 "*Birdy is big*". Second, the answer of item number 32 is stated in the text on sentence 4 "*Catty is bigger than Birdy,……*". Last, the answer of item

number 33 is stated in the text on sentence 4 "….. but <u>Doggy is the biggest</u>".

Understanding Level (C2) of Test A and Test B

Excerpts from Test A (for 7ᵗʰ Grade Students)

My lovely house
1) Question number 1
   What is the topic of the text?
   a. home   b. my lovely house
   c. house   d. our house

The text is for questions 19-22!
Ina   : Good morning, ma'am.
Mrs. Irna   : ….(19), how are you?
Ina   : ….(20) thank you

2) Question number 19
   a. Good by   b. Good night
   c. Good morning   d. Good afternoon
3) Questions number 20
   a. You are friend
   b. I am
   c. I am sorry
   d. I am lucky

Is	*he*	*smart*	*helps*	*he*
1	*2*	*3*	*4*	*5*

people
6

This text for number 44!
It is a room in your house in which you can find a pillow, bolster, and wardrobe. When you feel sleepy you can go there. What room is it?
4) Question number 45
   …..
   a. Living room   b. beth (*bed) room

   c. dinning room   d. kitchen

5) Question number 50
   a. 2-1-3-5-4-6

   b. 2-3-5-1-4-6
   c. 2-5-1-4-6-3
   d. 2-1-4-3-6-5

Item number 1, 19, 20, 45 and 50 are categorized into understanding level (C2) in Bloom Taxonomy Revised theory as it demonstrates understanding of fact and ideas by interpreting and stating the suitable words to complete the sentence. First, question number 1 asks the students to summarize the text provided entitled *My Lovely House*. The answer can be gotten only if the students understand the text. If they haven't understood the text they might choose option B. *My Lovely House* which is the title of the text. There is no instruction written in the test for item 19 and 20. However, it could be interpreted that the students are asked to find suitable words to complete the sentence. It does not just recall information, but they have to find implicit information and state in one's word. It is a kind of implicit question. Next, in item number 44, the students are instructed to interpret or guess what room is being described. The answer to this question is not found in the text. This is not a kind of recalling information question. Last, item number 50 is a C2question in Bloom Taxonomy Revised theory. The answer to this question is not found in the text. This is not a kind of recalling information question since the

students have to understand the whole words for then rearrange them into a good order of a sentence.

Excerpts from Test B (for 8th Grade Students)

The following text is for questions 5-10!

STUDENT ORGANIZATION OF SMPN 1 BIBOKI UTARA

To   : All students of SMPN 1 Biboki Utara

Please attend the farewell party for the grade IX class students that will be held on :

Date   : Saturday, 31th May 2019
Time   : 10 a.m
Place   : School Hall of SMPN 1 Biboki Utara

For all kind attention, we thank you very much.

OSIS Chairman

1) Question number 5
   What kind of text is it? It is an ……….
   a. Invitation   b. Announcement

   c. Advertisement   d. Information

2) Question number 8
   From the text, we can say that ………
   a. OSIS always (has) meeting every week
   b. The party is for all students of grade IX
   c. The party will be conducted by a teacher
   d. The party is for all students of SMPN 1 Biboki Utara

3) Question number 21
   Timothy is a student. …. is clever
   a. She   b. You

   c. They   d. He

4) Question number 44

Poor. The underlined word has an opposite meaning to …….
a. Bread   b.Good
c. Happy   d. Rich

For no 44 and 45 arranged jumbled words into a good sentence!

5) Question number 49

Is	the	he	car	washing
1	2	3	4	5

   a.   1-2-3-4-5
   b.   b. *2-3-4-5-1*
   c.   *c. 4-5-1-2-3*
   d.   *d. 3-1-5-2-4*

Item number 5, 8, 21, 44, and 49 are examples of items in the test that contain understanding level (C2). First, question number 5 is grouped into understand level question in the Bloom Taxonomy Revised theory. After reading the provided text, students are asked to classify what kind of text they have read. This is the example of the implicit question so the students need to interpret the answer. Question number 8 is categorized into understand level question in the Bloom Taxonomy Revised theory. To answer this question, students are asked to summarize the text they have read. The answer is implicitly stated in the text so the students need to interpret it based on their understanding of the text. Third, item number 21 is a kind of understand the level question of Bloom Taxonomy Revised theory. It includes in term of understand because it demonstrates an understanding of fact and ideas by

interpreting and stating the suitable words to complete the sentence. The question has meaning that we have to find suitable words to complete the sentence. It does not just recall information, but we have to find implicit information and state in one's word. The answer is not stated in the text because it is the implicit question. Then, item number 45 is a C2 question because it demonstrates an understanding of fact and ideas by interpreting and stating the suitable words to complete the sentence. Students have to interpret the synonym of the underlined. It does not just recall information, but students need to understand the words' meaning. The answer is not stated in the text because it is

the implicit question. Last, item number 49 is the kind of understanding level question in Bloom Taxonomy Revised theory. The answer to this question is not found in the text. This is not a kind of recalling information question since the students have to understand the whole words for then rearrange them into a good order of a sentence.

Findings of the two tests show that all questions are categorized into lower thinking skills question. In other words, there are no questions to test students' higher thinking skills. The comparison of LOTS and HOTS is presented in Figure 1.
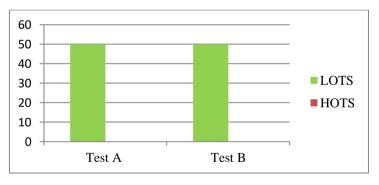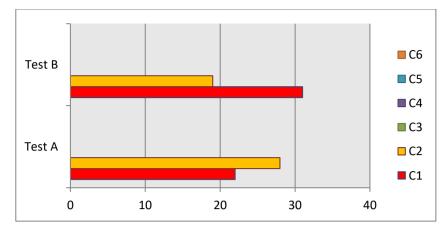

Figure 1. LOTS and HOTS questions in four tests

Figure 2. The total of C1, C2, C3, C4, C5, C6 in the tests

Figure 1 shows that in test A, the total of LOTS are 44 questions and HOTS are 6 questions. While test B consists of 42 questions to test LOTS and 8 questions to test HOTS. Specifically, the total of C1, C2, C3, C4, C5, and C6 in the tests are presented in figure 2.

Both tests given to the first and second grades students of Junior High School of Biboki Utara are applied on 2 levels, they are Remembering (C1) and Understanding (C2). Out of 100 items, 49 % of them isC1and 51 % of them is C2. It shows that the level of the test in a public Junior High School is dominated by C1and C2. The result asserted that the tests can be included to the lowest level of cognitive domain based on Bloom Taxonomy Revised theory.

Certain items in both test A and B need be reformulated since they contain some grammatical errors. The following are some excerpts showing the error in the test items/instruction:

1. Question number 2
   Where **is** *the writer live?*
   a.Atambua

   b. Kupang

   c. Kefa

   d. Jakarta

   The to be *"is"* should be replaced by the auxiliary verb "*does*" as the word *live* is a kind of verb and subject of that sentence (writer) is singular. The right sentence should be *Where* ***does*** *the writer live?*

2. Bill Christian has three pets. Their ***name*** are Catty, Doggy and Birdy. Birdy is big. Catty is bigger than Birdy, but Doggy is the biggest.

   Question number 31
   Birdy is…
      a. bigger
      b. big
      c. biggest

d. the big

The italic and bolded word on the above question (*name*) is considered as an error. The right words should be **names** since the previous subject is **their** which should be followed by plural form of nouns **names**.

3. It is a room in your house in which you can find a pillow, bolster, and wardrobe. When you feel sleepy you can go there. What room is it?
Question number 45
   a. Living room
   b. b. **beth** room
   c. c. dining room
   d. d. Kitchen

The word **beth** in option b from the above question should be replaced by

bedroom. The researcher considers this error as a kind of typo.

4. Question number 4
*The house **painted is**……. (*The house is painted…)*
   a. *Black*
   b. *b. Red*
   c. *Apple green*
   d. *White*

The instruction of the above question is arranged in the wrong order. The sentence is included in the passive sentence. The right sentence is *The house **is painted** blue*. To be **is** should precede the **verb 3** (*painted*).

CONCLUSION

From the data of research finding, the writers conclude that both tests given to the first and second grades students are applied only on 2 levels, they are Remembering (C1) and Understanding (C2). From the whole reading test items (100 items), 49 % of them is included in C1 (Remembering level) and 51 % of them is categorized into C2 (Understanding level). It shows that the level of the test in this public Junior High School is dominated by C1 and C2. There is no question in the level of *Apply, Analyze, Evaluate*, and *Create*. It shows that the English teaching and learning process only emphasize in the cognitive domain that is *Remember* and *Understand the* content of the text. The result asserted that the tests can be included in the lowest level of the cognitive domain based on Bloom Taxonomy Revised theory. Besides, certain test instructions in both test A and B need be paid more attention since they contain some grammatical errors.

Based on the result, the researcher suggests that to improve the level of cognitive process dimension of questions, from LOTS into HOTS, the teachers who

are included to the team of test maker need use Taxonomy Bloom Revised as a basic conceptual framework to make a good quality question. Besides, the English teacher as expected to be active in improving students' critical thinking. The English teachers are hoped to be more creative in running the English class so the students can be motivated more to learn English not only as a receiver but also as the producer.

ACKNOWLEDGEMENT

Praised to the Almighty God for His blessing and guidance that this research paper can be finished. The writer also wants to thank all people who have assisted the writers in finishing this paper especially the researchers whose writing are used and cited in this present paper. The writers hope that this paper can be fruitful for all the readers and hopefully this paper can be the reference for the next researchers who are willing to research in the same field.

REFERENCES

Ary, D., Jacobs, L. C., Razavieh, A., Sorensen, C, K. (2009). *Introduction to research in Education*. San Francisco: Cengage Learning.

Febriani, Bustami Usman & Asnawi Muslem. (2019). Analysis of Reading Comprehension Questions by Using Revised Bloom's Taxonomy on Higher Order Thinking Skills (HOTS). *EEJ, 10 (1). 2019*

Febriyani, Wisma Yunita &Indah, Damayanti (2020). An Analysis on Higher Order Thinking

Skill (HOTS) in Compulsory English Textbook for the Twelfth Grade of Indonesian Senior High Schools. *Journal of English Education and Teaching (JEET) e-ISSN: 2622-5867 p-ISSN: 2685-743x, 4(2). 170-183*

Hammersley, M. &Traianou, A. (2012). Ethics and educational research, *British Educational Research Association*, https://www.bera.ac.uk.Accessed on 20thAugust 2020.

Mayer, R. E. (2002). A Taxonomy for Computer-Based Assessment of Problem Solving. Computers in Human Behavior 18 623-632. http://dx.doi.org/10.1016/S0747-5632(02)00020-1

Mukti, Tery Triana. (2017). *The Analysis of Reading Test Items Based on Revised Bloom Taxonomy Theory in Vocational High School Grade XII*. (Undergraduate thesis,

Purworejo Muhamadiyah University). Retrieved from http://repository.umpwr.ac.id.:8080/handle/123456789/1378?show=full

Pratiwi, N. P. W., Dewi, N. L. P. E. S., & Paramartha, A. A. G. Y. (2019). The Reflection of HOTS in EFL Teachers' Summative Assessment. *Journal of Eeducational Reasearch and Evaluation, 3(3), 127-133*

Putra, T. K. & Abdullah, D. F. (2019). High Order Thinking Skill (HOTS) question in English National Examination in Indonesia. *Jurnal Bahasa Lingua Scientia,11 (1), Juni, 2019.*

Purnama, Y. I. &Nurdianingsih, F. (2019). The impact of higher order thinking skills (hots) instructions in teaching EFL speaking skill from the perspective of students' motivation. *Lingua Cultura, 13(4): 313-319. https://doi.org/ 10.21512/lc.v13i4.6105*

Thomas, A., & Thorne, G. (2009). How to increase higher order thinking. *Center for Development and Learning*. Retrieved March 19, 2019, from http://www.cdl.org/resource-library/articles/HOT.php?type=subject&id=18