An Analysis on Higher Order Thinking Skill (HOTS) in Compulsory English Textbook for the Twelfth Grade of Indonesian Senior High Schools

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Abstract

This research aimed to 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”; and to explain the dominant cognitive dimension used in this textbook. The design of this research was descriptive quantitative, and the instruments of data collection were a table checklist and an analysis card. This research classified used content analysis. The researcher separated all the tasks in the textbook, depending on the topics. The researcher read all the textbook tasks to find out the results and identify all the tasks. The researcher identified the higher-order thinking skill contained in the table form. The analysis card was used as the guideline to bring the instruction questions into an acceptable portion of higher-order thinking capacity. The results showed that the composition of Higher Order Thinking Skill (HOTS) presented in the language skill tasks are lower than the Lower Order Thinking Skill (LOTS). Also, the most dominant cognitive dimension used in the language skill tasks of this textbook is remembered (C1), with 41%. Hence, it is not enough if the teacher just only uses the English textbook as a teaching tool to improve students HOTS ability.

Keywords: textbook, higher-order thinking skills (HOTS)

Introduction

A textbook has an important role in the teaching and learning process. In general, the textbook is used as a guideline for the teacher to deliver learning material. Damayanti (2019) states that the English textbook contains several materials, instruction, and tasks to improve students’ ability in English. It is very helpful both for students and teachers. It helps the teachers to give the appropriate materials to the students systematically. Febrina et al. (2019) declare that a textbook...
can be a reference for teachers and students in the educational process, especially in language learning.

The availability of textbooks is one of the essential components that must exist in the learning process. Textbook books play an important role in providing clarity content of teaching. It helps students in applying the curriculum, and it helps teachers to choose the appropriate method used in classroom activities. In line with Margana & Widyantoro (2017), they state that textbooks serve as a guide for students and their teachers of any level of education to be actively engaged in classroom practices. As teaching sources, textbook usually becomes the main source of material that will be given by the teacher to their students, especially in giving tasks. In line with Anasy (2016), who argues that in Indonesia, textbooks are considered to be one of the primary teaching and learning tools in most EFL classrooms. It can be inferred that both teachers and students should be supplied with useful resources of tasks and activities in a textbook (Febrina et al. 2019).

Suitability of the contents of the textbook affects the understanding of the students. In getting the appropriate textbook, the teacher should be selective in choosing a good or appropriate book to be used. Also, in referring to the details and comments, it can be interpreted that any aspects of the textbook, in particular the English textbook, should be continuously monitored and checked as one of continuous improvement (Anasy, 2016). Many things need to be evaluated to get a textbook component that corresponds to the needs of students. “Many aspects in the coursebook need an evaluation, one of the aspects is the task or the tasks” (‘Ilma, 2018). In line with Anasy (2016), who implies that other elements of the textbook need to be evaluated, such as textbook design, training, textbook instructions, and teaching materials that affect and motivate the students in applying the skills contained in the textbook.

Curriculum 2013 has been implemented in Indonesia for almost seven years. The curriculum 13 focuses on the student-centered rather than the teacher-centered. Curriculum renewal in Indonesia demands an increase in higher-order thinking skills (HOTS). Since the Indonesian curriculum has been updated into the curriculum 2013, the government requires teachers to assist students in prioritizing their critical thinking through the Educational Quality Insurance Institution (LPMP). This involves assessing, examining, and generating HOT (Higher Order Thinking). By practicing tasks on
questions that contain HOTS, it can improve the critical thinking skills in students, but this is still questionable. In line with Anasy (2016), he claims that many tasks involving the higher-order thinking ability in the curriculum may still be problematic in practicing the higher-order thinking skill. This is because some comments assume that some textbooks contain only a few HOTS tasks. Moreover, the more HOTS content in a textbook, the greater the probability of HOTS to be trained and taught to the students (Pratama & Retnawati, 2018).

There are some previous studies about the implementation of HOTS (higher-order thinking skills) in the English textbook. They were first conducted by ‘Ilma (2018) entitled “An Analysis of Reading Tasks in Bright Course Book for the Seventh Grade of Junior High School of curriculum 2013, Published by Erlangga in The Year of 2016”. Then, conducted by Atiullah et al. (2019) entitled “Using Revised Bloom’s Taxonomy to Evaluate Higher Order Thinking Skill (HOTS) in Reading Comprehension Questions of English Textbook for Year X of High School.” Next, conducted by Igbaria (2013) in the textbook entitled Horizon for 9th grade and after that, conducted by Anasy (2016) in the textbook entitled Pathway to English textbook for 11th grade. Fifth conducted by Zaiturrahmi (2017) in the textbook entitled Bahasa Inggris SMA/MA/SMK/MAK Kelas 1 Semester1. Next conducted by Pratiwi (2015) in the textbook entitled Can Do 2 Practice book. The last conducted by Margana and Widyantroro (2017) entitled “Developing English Textbooks Oriented to Higher Order Thinking Skill for Students of Vocational High Schools in Yogyakarta.” However, in this research, the researcher employs the higher-order thinking skill theory based on the revised edition of Bloom’s Taxonomy by Krathwhol and Anderson which consist of the three skills, analyze, evaluate, and create. This revised edition is an updated version of original Bloom’s taxonomy. The researcher chooses to analyze the composition of the higher-order thinking skill in language skill tasks of English Textbook entitled Bahasa Inggris SMA/MA/SMK/MAK kelas XII Edisi revisi 2018 published by Ministry of Education and Culture. The purpose is to make sure that the textbook has been supporting the students in encouraging their competence to survive in the English communication environment by providing higher-order thinking skills in the tasks.
Research Methodology

In this research, the researcher used descriptive quantitative research design to analyze the data. Nanda (2019) states that quantitative analytical allow the reporting of summary results in numerical terms to be given with a specified degree of confidence. The writer used statistical calculation to determine the contribution of each level of Bloom’s taxonomy, especially the level of higher-order thinking skills. Moreover, the researcher has classified this research as a documentary or content analysis. Ary et al. (2006) state that content analysis focuses on analyzing and interpreting recorded material to learn about human behavior. The material may be public records, textbooks, letters, films, tapes, diaries, themes, reports, or other documents. The researcher analyzed the content of the textbook.

One of the aims of this approach was to use the revised taxonomy of Bloom to classify the higher-order thinking skills in instruction questions posed in the English Textbook entitled Bahasa Inggris SMA/MA/SMK/MAK kelas XII Edisi revisi 2018 published by Ministry of Education and Culture. Furthermore, the data collected were quantitative; it organized Higher order thinking skills (HOTS) from an English coursebook, and so interprets the data.

The source of the data of this research was the English Textbook for Grade XII entitled “Bahasa Inggris SMA/MA/SMK/MAK Kelas XII” was published by Pusat Kurikulum and Perbukuan Balitbang Kemendikbud in 2018. This is the revised edition textbook. This textbook was designed for senior high school (SMA/MA/SMK/MK) grade XII. It includes the materials in all four basics English Skills, listening, reading, speaking, and writing, and also the language components; they are grammar and vocabulary. A grammar task is also needed for the students. Yunita (2016) declares that in the process of learning a new language, one cannot be away from learning the grammar. Learning a language means learning grammar. Thus, if the students mastered grammar, it will help them learning speaking and other skills (Syafryadin, et al. 2019)

The instruments of this research were a table checklist that was adapted from Anasy (2016), and an analysis card that was adapted from Anderson & Krathwohl (2001). Both of these instruments were conducted using Revised Bloom’s Taxonomy.

In this research, the researcher used inter-rater reliability because of this research using two raters. The method used was Holsti’s Method. Cited in Wang (2011), Holsti’s system is a variation of percentage agreement measurement.
Reliability means consistency and dependability. Brown and Abeywickrama (2010) state that a reliable test is consistent in its conditions across two or more administrations. If the same test is given to the same student or matched students on two different occasions, the test should yield similar results.

In this research, the researcher collected and listed all of the tasks in the textbook. The researcher separated all the tasks in the textbook, depending on the topics. The researcher read all the textbook tasks to find out the results and identify all the tasks. The researcher identified the higher-order thinking skill contained in the table form. The researcher identified the higher-order thinking skill contained in the table form. The analysis card was used as the guideline to bring the instruction questions into an acceptable portion of higher-order thinking capacity.

In this research, the practical steps of data analysis used cited in Lestari (2019) as follows: analyzing the documents, classifying, coding, tabulating, analyzing, and reporting.

Findings and Discussion,

Findings

In this textbook, there were 99 tasks from 11 chapters. It consists of 26 speaking skill tasks, 35 reading skill tasks, 25 writing skill tasks, and 13 listening skill tasks. The tasks were analyzed one by one. The results of the investigation were shown in the table below:

<table>
<thead>
<tr>
<th>Cognitive Dimension</th>
<th>The composition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>L O T S C1</td>
<td>40</td>
<td>40.40%</td>
</tr>
<tr>
<td>C2</td>
<td>26</td>
<td>26.26%</td>
</tr>
<tr>
<td>C3</td>
<td>11</td>
<td>11.11%</td>
</tr>
<tr>
<td></td>
<td>77</td>
<td>77.78%</td>
</tr>
<tr>
<td>L O T S C4</td>
<td>3</td>
<td>3.03%</td>
</tr>
<tr>
<td>C5</td>
<td>5</td>
<td>5.05%</td>
</tr>
<tr>
<td>C6</td>
<td>14</td>
<td>14.14%</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>22.22%</td>
</tr>
<tr>
<td>Total</td>
<td>99</td>
<td>100%</td>
</tr>
</tbody>
</table>
**Legenda:** C1: Remember, C2: Understand, C3: Apply, C4: Analyze, C5: Evaluate, C6: Create.

Table 1 clearly showed the composition of HOTS (Higher Order Thinking Skill) in this textbook presented in the imbalance portion. As shown in the chart above, the difference in compositional percentage is quite significant between one and another. In detail, the remember (C1) has a big composition in the textbook, with an average of 41%. It is followed by understanding (C2) with 26%; then, the create (C6) with 14%, next is apply 11% after that is evaluate (C5) with 5%. The last is analyze (C4) with 3%.

There are 99 tasks in four skills in this textbook. The most dominant cognitive dimension used in this textbook showed in the chart below.

![Chart 1: Composition of HOTS](image)

**Chart 1** the composition of HOTS in “Bahasa Inggris SMA/MA/SMK/MAK Kelas XII Edisi Revisi 2018”.

The chart above showed that remember (C1) was the most composition in whole tasks in this textbook. In detail, remember (C1) composition is 41%. It contains 40 from 99 tasks in this textbook, followed by understanding (C2) is 26%. It contains 26 tasks from 99 tasks in this textbook. Next is Create (C6) 14%. It contains 14 tasks from 99 tasks in this textbook. Then is Apply (C3) 11%, it contains 11 tasks from 99 tasks in this textbook. After that is evaluate (C5) 5%. It contains 5 tasks from 99 tasks in this textbook. The last is to analyze (C4) 3%. It contains only 3 tasks from 99 tasks in this textbook. Based on the whole tasks of this textbook, the researcher found that language skill tasks more emphasized in LOTS rather than HOTS. First is In 26 tasks of
speaking skill. There were 92, 31% LOTS, and 7.69% HOTS. In detail, it consists of remembering (C1) with 61.53%, followed by understanding (C2) and apply (C3) with 15.38%, next is create (C6) with 7.69%, analyze (C4) and evaluate (C5) are not found in speaking skill tasks. Second is reading skills. From 35 tasks of reading skill, there were 91.42% LOTS and 8.58% HOTS. In detail, it consists of remembering (C1) with 37.14%, followed by understanding (C2) with 45.71%, then apply (C3) with 8.57%, next is creating (C6), analyze (C4) and evaluate (C5) with 2.86%. The third is writing skills. From 25 tasks of writing skill tasks, there were 52% HOTS and 48% LOTS. In detail, it consists of remembering (C1) with 32%, followed by understanding (C2) with 16%, then applies (C3) with 0%, next is analyzed (C4) with 4% and evaluate (C5) with 12%, and create (C6) with 36%. The last is the listening skill. From 13 tasks of listening skill tasks, there were 23.08% HOTS and 77.92% LOTS. In detail, it consists of remembering (C1) with 46.15%, followed by understanding (C2) with 23.07%, then applies (C3) with 7.69%, next is analyze (C4) with 15.38% and evaluate (C5) with 7.7%, and create (C6) with 0%.

**Discussion**

This study reveals that in the overall language skill tasks analyzed in “Bahasa Inggris SMA/MA/SMK/MAK Edisi Revisi 2018” textbook, there is an imbalance portion of the cognitive dimension. The findings indicated that both LOTS and HOTS were involved in the tasks presented in this textbook. The majority of listening, reading, and speaking skills tasks are emphasized LOTS different with writing skill tasks. It emphasized HOTS. The result showed that the composition of Higher-Order Thinking Skill (HOTS) is lower than the Lower Order Thinking Skill (LOTS).

The study has similar results to Igbaria (2013) in the textbook entitled Horizon for 9th grade. Then, Anasy (2016) in the textbook entitled Pathway to English textbook for 11th grade. Also, Atiullah et al. (2019) in the textbook entitled English textbook for year X published by Ministry of Education and Culture, and ‘Ilma (2018) in the textbook entitled Bright for 7 grade which concluded that the distribution of Higher Order Thinking Skill (HOTS) is lower than Lower Order Thinking Skill (LOTS). It might happen because the lower order thinking problem is familiar and often happens in the lesson plan, the students are the easiest to respond, and the teachers are much harder to do (Airasian & Russel 2008).
On the opposite, there may be a few inputs from the Higher Order Thinking Skill (HOTS) problem because the problems seem much more complicated than the Lower Order Thinking Skill (LOTS). Furthermore, the researcher argues that the author of the textbook considers the time needed to do higher-order thinking skill (HOTS) tasks. It takes much longer time to do higher-order thinking skill (HOTS) tasks rather than doing lower order thinking skill (LOTS) tasks while the time of classroom activities is very limited. It is supported by a statement from Airasian & Russel (2008) that the issue of higher-order thinking skills frequently needs teachers to wait a considerable amount of time for students to answer those questions.

The government expects students to achieve various competencies with the application of HOTS or Higher Level Thinking Skills (Ariyana et al., 2018). Hence, it is not enough if the teacher just only uses the English textbook Bahasa Inggris SMA/MA/SMK/MAK Edisi Revisi 2018 as a teaching tool to improve students HOTS ability, because this textbook emphasized more rather than HOTS. In line with Zaiturrahmi et al. (2017) declares that difficult to accomplish the job of challenging learners to be HOTS since the tasks in the textbook focused solely on LOTS. Obviously, they were unaware of the mindset of the K13 program, which was supposed to build students ' higher thinking skills.

Moreover, the difference of HOTS’s compositional percentage is quite big between one and another, where Analyze (C4) has the lowest composition. This is in contrast to the study conducted by Anasy (2016) in the textbook entitled Pathway to English textbook for 11th grade and ‘Ilma (2018) in the textbook entitled Bright for 7 grade, where Analyze (C4) has the highest composition of the three other levels. It might happen because this is the first level of HOTS; it is not too difficult to do for students, so there are not so many tasks needed at this level. It is supported by Igbaria (2013) that states all educators are aware that this is the first stage of higher thinking processes, so it wouldn’t be too difficult for students to deal with such issues. Create (C6) obtained the highest composition. It is quite surprising if comparing to another study conducted by Anasy (2016), which found that create (C6) has a null contribution.

From 11 chapters in the textbook, Chapter 4: Do you know how to Apply for Job? It has the highest composition of HOTS with 42%. It consists of three-level of
Higher-order Thinking Skills (HOTS) such as Analyze (C4) with 14%, followed by Evaluate (C5) with 14% and Create (C6) with 14%. It might happen because the author of this textbook makes it in line with the title of this chapter that uses “How.” HOTS is emphasized “knowing how” rather than “knowing what.” This chapter also contain writing tasks. Writing tasks in this textbook is only skill tasks that emphasized more HOTS rather than LOTS.

Surprisingly, the result is contrary to Chapter 8: “How to Make” and Chapter 10: “How to use Photoshop” that contain the null contribution of HOTS while the title of this chapter use “How.” It might happen because both of this chapter dominated by reading and listening tasks where reading and listening tasks in this textbook emphasized more LOTS rather than HOTS.

Based on one result of this research, the researcher found that the most cognitive dimension used in the instructional question for four skills tasks in the English textbook “Bahasa Inggris SMA/MA/SMK/MAK Kelas XII Edisi Revisi 2018 is remembered (C1). Remember (C1) has a big composition is almost half of the tasks in this textbook. It means that this textbook is focusing on retrieving data from long term memory.

The study has a similar result with Zaiturrahmi (2017) in the textbook entitled Bahasa Inggris SMA/MA/SMK/MAK Kelas 1 Semester1 and Pratiwi (2015) in the textbook entitled Can Do: 2 Practice book, which concluded that the most dominant cognitive dimension used is knowledge or remember. Knowledge or remember emphasized on LOTS. Although it emphasized LOTS, it doesn’t mean that it is doesn’t important. It supported by a statement from Soozandehfar & Adeli (2016). They state that by having referred to as lower-order skills, it does not make knowledge or understanding any less important, rather they are arguably the most important cognitive skills as knowledge and understanding of a topic is crucial in advancing the taxonomy levels. Hence, the Taxonomy is being misused, in accordance with Booker’s inference. Bloom never claimed that any of his cognitive levels were less important, only that they were following a hierarchical structure.

In short, the textbook entitled “Bahasa Inggris SMA/MA/SMK/MAK Kelas XII Edisi Revisi 2018” emphasized LOTS rather than HOTS. Remember it has a significant composition is almost half of the tasks in this textbook.
Conclusion and Suggestion

Conclusion

Based on the result from the previous chapter, the researcher concludes that the cognitive dimension in each task presented in an imbalance portion. It is dominated to remember (C1), followed by understanding (C2), Create (C6), Apply (3), Evaluate (5), and analyze (C4).

It can be concluded that the composition of Higher Order Thinking Skill (HOTS) presented in the language skill tasks on the English Textbook entitled “Bahasa Inggris SMA/MA/SMK/MAK Kelas XII Edisi Revisi 2018”, are lower than Lower Order Thinking Skill (LOTS). In addition, the most dominant cognitive dimension used in the instructional questions for the task in this textbook is remembered (C1). Nevertheless, the researcher found it difficult to accomplish the job of challenging learners to be HOTS, since 77.8 percent of the tasks in the textbook focused solely on LOTS. Obviously, they were unaware of the mindset of the K13 program, which was supposed to build students’ higher thinking skills.

Suggestion

The Teachers

The “Bahasa Inggris SMA/MA/SMK/MAK Kelas XII Edisi Revisi 2018” textbook showed dominantly in presenting elements that are closely related to Lower Order thinking Skill (LOTS) rather than Higher Order Thinking Skill (HOTS). To solve this issue, the English teachers have to be professional teachers by giving extra information about tasks that contain HOTS and giving extra classroom activities that related to HOTS. The teachers also have to guide the students to know the Higher Order Thinking Skills (HOTS) deeply. It is possible to add some supplemental materials to make it balance.

Authors and Publishers

The result of this research found that this textbook emphasizes more LOTS rather than HOTS. The authors “Bahasa Inggris SMA/MA/SMK/MAK Kelas XII Edisi Revisi 2018” have to pay more attention to Higher-Order Thinking Skills (HOTS) tasks, because the
government expects students to achieve various competencies with the application of HOTS or Higher Level Thinking Skills (Buku Pegangan Pembelajaran HOTS published by Ministry of Education and Culture, 2018).

Educational Practitioner

Based on the results of this research, it was found that LOTS is more dominant than HOTS in this textbook. It means that there is a lack of books published by the Ministry of Education and Culture. If the teacher just only uses this textbook, it is not enough to improve students’ HOTS abilities. For that reason, educational practitioners need to pay attention to every book to be published.

Further Researchers

Since this research is limited to the instructional question of language skills in an English textbook, for further researchers who interest in conducting the study under the same topic can language components such as grammar and vocabulary, different subjects such as national examination test items, and the various textbooks. This research also limited to an integrated level that found in this textbook, the researcher just only focuses on one level in it, for further researcher possible to analyze the integrated level contained in this textbook.

Moreover, the further researcher can develop the English teaching materials by considering the result of this study which provide the balance portion of the cognitive domain and increase Higher Order Thinking Skill (HOTS).

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