



## The Analysis of Reading Comprehension Question Levels in English Textbook for Vocational High School Based on Revised Bloom's Taxonomy

Intan Kumala Sari<sup>1</sup>, Sahuddin<sup>2</sup>, Yuni Budi Lestari<sup>3</sup>

<sup>1,2,3</sup> English Education Department, Faculty of Teacher Training and Education, University of Mataram, Indonesia

Received : December 15, 2023

Revised : December 29, 2023

Accepted : December 30, 2023

Published: December 30, 2023

### Corresponding Author

Author Name: Intan Kumala Sari

Email: [intankumala.s01@gmail.com](mailto:intankumala.s01@gmail.com)

DOI: [10.29303/jeef.v3i2.566](https://doi.org/10.29303/jeef.v3i2.566)

© 2023 The Authors. This open access article is distributed under a (CC-BY License)



**Abstract:** Reading question is one of the tools that can improve students' critical thinking. In teaching and learning process, providing questions at the HOTS level really helps students to improve their comprehension. This study aims to analyze the category of cognitive levels in reading questions based on Revised Bloom's Taxonomy in English textbook "forward an English" for 10th Grade Students of Vocational High School. It used descriptive qualitative research. The data of this study was all of reading comprehension questions found in the textbook. Based on the results, researcher found 202 reading comprehension questions in total which is divided into LOTS level that consist of 133 questions or 65.8% and HOTS level that consist of 69 questions or 34.2%. The most dominant category represented in the English textbook was "remembering" level with 78 questions or 38.6% and the lowest category was "applying" level with 4 questions or 2.0 %. In conclusion, the most of the reading comprehension questions in the English textbook "Forward an English" were at the low level of the cognitive domain. Therefore, the teacher must develop more questions in HOTS level so that the students' need is in accordance with the demands of 2013 curriculum.

**Keywords:** reading comprehension questions, English textbook, revised bloom's taxonomy

### INTRODUCTION

The English subject for the Vocational High School (VHS) education level aims to develop students' potential to have the communicative competence needed for their expertise program by using interpersonal, transactional, and functional texts both orally and in writing. The English skills that students need to master are listening, speaking, reading and writing. The ability to understand reading texts is very important for students because it can improve students' critical thinking processes. In Indonesia, the 2013 curriculum emphasizes the development of HOTS so that students are able to think critically. This is in line with the 21st century skills that must be possessed to be ready to enter the world of work, which includes 4C that consist of critical thinking, creativity, collaboration and communication.

In the 2013 curriculum, 4C competencies are integrated in each subject and are expected to be developed through various learning activities such as group discussions, presentations, or projects that require students to apply their understanding and think critically, creatively, communicate, and be able to work with other people. Kharisma & Lestari (2022: 216) stated that "integrating HOTS is important to prepare students for the 21st century, it is not an easy task to raise people who can think critically. It requires a continuous, consistent formation process, as well as environmental assistance". A student is required to be creative. Creativity contributes to the discovery of new ideas using comprehensive thinking and searching. Thus, it is crucial for vocational education to organize learning so that students can improve critical thinking abilities (Mutohhari et al., 2021). To help students to have critical thinking skills, textbooks are needed as learning media that can assist teachers in increasing students' understanding.

According to Richard and Renandya (2002), textbooks are learning materials that are commonly used in teaching and learning processes. A good textbook is a book that is

made according to the curriculum standards set by the government in Indonesia (Ministry of Education and Culture, 2005). In the world of education, a textbook is a mandatory thing that must be owned by every school as a support for teaching materials and a teacher's guide in teaching students. Richard (2001) stated that textbooks are the key component in most language programs. For example, textbooks provide a variety of reading texts and exercises to improve reading comprehension skills. The English textbook not only contains reading skills but also other language skills such as listening, speaking and writing. It also contains language components such as vocabulary and grammar. English textbooks for Vocational High School provide a variety of content that can be used as material to improve English language competence. Students who attend school at the VHS level will really need English language skills.

VHS is a school that prepares students to be able to go directly into the field and be ready to work. Having the ability to speak English will be an added value for prospective workers. After graduating from school, graduate students will have many competitors to get the job they want. Therefore, students must prepare themselves to be able to adapt to the competition because English is a very important thing that must be mastered by vocational students so they are ready to face the world of work in the global era. However, the facts in the field show that there are still many VHS graduates who cannot use English both orally and in writing. According to the results of research related to the English role-play speaking test given and assessed by the teacher, 73% of the English competence of vocational students is included in the Basic II category and has not reached the target (Yusra et al., 2022).

Furthermore, based on the researcher's experience during teaching apprenticeship (PLP) at VHS in SMKN 4 Mataram, the researcher found out in an interview with teachers and students regarding the mastery of reading

comprehension at school. The problems related to reading difficulties were poor students' reading skills, lack of understanding regarding textual content, students could not retell the reading text, they were very fixated on the contents of the text and the questions. In addition, the problem is lack of teaching materials provided by the teacher. Teachers usually only use textbooks without developing the contents of the book so that the material taught to students is very limited. Moreover, the lack of motivation of students in learning English is the reason why students find it difficult to master English. Students' motivation to learn English only showed a slow increase due to their negative views of English and low English proficiency levels. Although 68% of students believe that English is important for future vocational goals, 56% of them state that the language is difficult to learn (Yusra et al., 2022). Factors causing students' lack of English skills, especially in mastering students' HOTS abilities consist of teacher misunderstandings about the concept of HOTS, limited teacher competence in developing HOTS-based materials and activities, and students' dependence on teachers (Hidayat & Lestari, 2022).

Based on the demand for mastery of English and the problems mentioned above, the researcher limited the focus of the problem related to the lack of teaching materials provided by the teacher. Therefore, researcher is interested in analyzing the VHS English textbook "Forward an English" used by teachers at school. Therefore, the researcher wants to know whether the level of the question is included in the HOTS or LOTS category. To achieve the objectives of this study, the researcher focused on cognitive level analysis using Revised Bloom's Taxonomy theory, namely C1 (Remembering), C2 (Understanding), C3 (Applying) which fall into the Lower Order Thinking Skill (LOTS) category and C4 (Analyzing), C5 (Evaluating), C6 (Creating) which fall into the Higher Order Thinking Skill (HOTS) category. The cognitive domain is focused on intellectual skills such as critical thinking, problem solving, and creating a knowledge base (Anderson & Krathwohl, 2001). After knowing the level of each reading problem in the textbook, the researcher will be able to conclude whether the textbook is able or not to support students' ability to think critically based on the Revised Bloom's Taxonomy theory. The researcher chose the textbook "Forward an English" for 10th Grade Students of VHS because this textbook was written based on the 2013 curriculum and published by a well-known and trusted publisher, Erlangga. This textbook is also used by many schools in Indonesia. Based on the researcher's experience of PLP at VHS in Lombok, English teachers use the textbook "Forward an English" as teaching materials to support the learning and teaching process at school.

Based on the background of the study and the research focus above, the research question was "what are the cognitive levels of reading comprehension questions in English Textbook "Forward an English" based on Revised Bloom's Taxonomy?"

**RESEARCH METHODS**

This research was conducted by using descriptive qualitative research. According to Sugiyono (2007), qualitative method is a method of research that is used to examine natural objects and emphasize the meaning or purpose. In this research, the researcher analyzed the English Textbook "Forward an English" for 10th Grade Students of

Vocational High School. The textbook was written by Shyla K. Lande & Eka Mulya A. It was published by Erlangga. It was developed based on 2013 curriculum. It contains 13 chapters and 236 pages.

There were two steps for collecting the research data: 1) Reading the textbook, and 2) Collecting data using the classification column. The checklist was as follows:

Table 1. Checklist Column for Data Collection

Unit	No.	Reading Comprehension Questions	Cognitive Domain						
			LOTS			HOTS			
			C1	C2	C3	C4	C5	C6	
1		What are the steps to make delicious soup?	✓						

To analyze the data as on Table 1, the researcher used the analysis technique proposed by Milles and Huberman (1994) that consist of data reduction, data display and conclusion/verification.

To validate the data, the researcher applied triangulation. Triangulation is an effective method for proving concurrent validity, particularly in qualitative research (Cohen, 2018: 265). Investigator triangulation, time triangulation, combined levels of triangulation, space triangulation, methodological triangulation, and theoretical triangulation are all the examples of triangulation. This research used investigator triangulation. The validator in this study was English teacher who are expert in this field. To conduct data validity, the researcher took several steps. First, the researcher analyzed the data that had been collected independently. Second, after analyzing the data, the results were discussed with the validator. Third, the final results of data analysis were checked and compared between the researcher's and validator's analysis. The last step was that the revision was made based on the validity of the result.

**FINDINGS AND DISCUSSION**

Based on the data that have been collected in this research, there are 78 questions of remembering level (C1), 51 questions of understanding level (C2), 4 questions of applying level (C3), 34 questions of analyzing level (C4), 21 questions of evaluating level (C5), and 14 questions of creating level (C6). It can be concluded that there are 133 questions for the LOTS category and 69 questions for the HOTS category. The explanation below explains some of the analysis results.

**Remembering Level (C1)**

The researcher found 78 comprehension questions that belong to the remembering level (C1) in Revised Bloom's Taxonomy theory. In this level, the operational verbs that the researcher has analyzed consist of memorize, underline, define and identify. In Table 2 are some lists of questions from the textbook along with the operational verbs.

Table 2. The Questions List of Remembering Level in the English Textbook

No.	Reading Comprehension Questions	Operational Verb
1.	What will Louis Yu be doing on Friday at 9.30 a.m.?	Memorize
2.	Underline all the verbs in the text.	Underline
3.	What is Stonehenge?	Define
4.	What is the congratulations expression in the letter?	Identify

### Understanding Level (C2)

The researcher found 51 comprehension questions that belong to the understanding level (C2). In this level, the operational verbs that the researcher has analyzed consist of describe, interpret, give main idea, conclude, summarize, explain, translate, match, identify, and predict. In Table 3 are some lists of questions from the textbook along with the operational verbs.

Table 3. The Questions List of Understanding Level in the English Textbook

No.	Reading Comprehension Questions	Operational Verb
1.	How would you describe R.A. Kartini?	Describe
2.	What is the announcement for?	Interpret
3.	What is the main idea of the text?	Give main idea
4.	Who might be interested in the announcement?	Conclude
5.	Could you tell the sequence of the events in brief?	Summarize
6.	Why is it necessary to list days in Text 1?	Explain
7.	Guess the meaning of the following underlined words.	Translate
8.	Match the words with their definitions and write your translation next to English words.	Match
9.	What do you call it?	Identify
10.	What happens if a worker does not follow the procedures?	Predict

### Applying Level (C3)

The researcher found 4 comprehension questions that belong to the applying level (C3). In this level, the operational verbs that the researcher has analyzed consist of change. In Table 4 are some lists of questions from the textbook along with the operational verbs.

Table 4. The Questions List of Applying Level in the English Textbook

No.	Reading Comprehension Question	Operational Verb
1.	Out of the blue a big wave pulled her mother's body into the ocean. The underlined phrase can be best replaced by _____.	Change

### Analyzing Level (C4)

The researcher found 34 comprehension questions that belong to the analyzing level (C4). In this level, the operational verbs that the researcher has analyzed consist of compare, detect, explain, and connect. In Table 5 are some lists of questions from the textbook along with the operational verbs.

Table 5. The Questions List of Analyzing Level in the English Textbook

No.	Reading Comprehension Questions	Operational Verb
1.	What is the difference between Text 1 and Text 2?	Compare
2.	Which memo requires the readers NOT to act?	Detect
3.	Analyze the narrative structure of the following legend.	Explain
4.	What is the similarity of the two legends?	Connect

### Evaluating Level (C5)

The researcher found 21 comprehension questions that belong to the evaluating level (C5). In unit 1 consists of 2 questions, unit 3 consists of 2 questions, unit 4 consists of 1 question, unit 5 consists of 1 question, unit 7 consists of 11 questions, unit 8 consists of 1 question, and unit 12 consists of 4 questions. In this level, the operational verbs that the researcher has analyzed consist of judge, decide, and predict. In Table 6 are some lists of questions from the textbook along with the operational verbs.

Table 6. The Questions List of Evaluating Level in the English Textbook

No.	Reading Comprehension Questions	Operational Verb
1.	What is the moral of the story?	Judge
2.	Is there any opinion of the writer?	Decide
3.	Do you think you can be an entrepreneur? What will you do?	Predict

### Creating Level (C6)

The researcher found 14 comprehension questions that belong to the creating level (C6). In this level, the operational verbs that the researcher has analyzed consist of make, write, and design. In Table 7 are some lists of questions from the textbook along with the operational verbs.

Table 7. The Questions List of Creating Level in the English Textbook

No.	Reading Comprehension Questions	Operational Verb
1.	Read the poem and write a consoling letter to her. Remember to use expressions of plans and intentions.	Write
2.	Make questions based on the text in task 13.	Make
3.	Create a direction based on the following situations in the provided space. Choose one situation and draw it.	Design

### Discussion

In the English textbook "Forward an English", researcher found 78 questions at the remembering level (C1) with the operational verbs consisting of memorize, underline, identify, and define. According to Anderson & Krathwohl (2001), remember is recalling the relevant knowledge from the long-term memory. The way to determine the type of questions that belongs to the remember level is by knowing the intent of the question. For example, "when did the event happen?". The basic competences 3.7 and 4.7 of recount text are analyzing and composing. However, this type of questions asks students to remember the information that is already available explicitly in the textbook so that students only need to remember existing information from the text.

In addition, some questions at the remembering level ask students to recall information from their background knowledge. For example, "have you seen these kinds of texts?". Background knowledge of the reading material highly influences the readers' comprehension process of the content of the text (Babashamsi et al., 2013). The remembering level is the lowest level at the LOTS level, if students are only able to remember information without taking action, then the student is only at the lowest level. Therefore, students need to improve their understanding to

the HOTS level so that their comprehension of the reading text is getting better.

Then, for the understanding level (C2), the researcher found 50 questions in the textbook with operational verbs consisting of describe, explain, interpret, conclude, summarize, give main idea, match, translate, identify and predict. Anderson & Krathwohl (2001) stated that understand is the act of expressing the knowledge by one or more explanation. The way to determine the type of question that belongs to the understand level is by understanding the entire content of the text. For example, "could you tell the sequence of the events in brief?". The basic competences 3.8 and 4.8 of narrative text are analyzing and presenting. However, this type of question asks students to understand and summarize the text. To answer questions at the understanding level, students must understand the content of the text and then be able to summarize and explain the information. Students can combine the information of the text with the knowledge they already know. Understanding happens throughout the reader-text interaction (Pourkalthor & Kohan, 2013). The information provided is not stated directly but needs more understanding to be able to answer the question.

Furthermore, for the level of applying (C3), researcher only found 4 questions with the operational verb consisting of change. Apply is to use information or skills in a new situation (Anderson & Krathwohl, 2001). The way to determine the type of question that belongs to the applying level is by identifying the direction of the question that asks students to perform an action. For example, "change the subject of the the text from 'I' to 'a name of person' or 'they'". The basic competences 3.1 and 4.1 of text about identity and family relationships are analyzing and composing. However, this type of question asks students to apply the information in the text and then directed to a different situation. In this case, students should change the linguistic elements of the text. According to Starr et al. (2008), applying is using the idea to a specific situation. This type of question requires students to use the information from the text in a new situation.

Next, for the analyzing level (C4), researcher found 34 questions with the operational verbs consisting of compare, explain, detect, and connect. According to Anderson & Krathwohl (2001), analyze is breaking down material into different parts and then determine how they relate to each other. The question types for the analyzing level require students to analyze the information in the text. For example, "analyze the narrative structure of the following legend". The 3.8 basic competence in syllabus of VHS is to analyze the social functions, text structure, and linguistics elements of several oral and written narrative texts by giving and asking information related to simple folk legends, according to the context of use. Students must analyze, identify, and explain the information from the text. The explanation about analyzing is supported by Chi Duc (2008) that analyzing is breaking information into parts to explore understanding and relationships. Questions at the analyzing level in the textbook usually ask students to compare several things and then explain the relationship between one and the other.

Moreover, for the evaluating level (C5), researcher found 21 questions with the operational verbs consisting of judge, predict, and decide. Anderson & Krathwohl (2001) stated that evaluate is making judgement based on criteria and standards. Richlin (2006), and Munzenmaier (2013) in

Fitri et al. (2019) stated that they also agree with this definition of evaluating. The question type at the evaluating level asks students to decide and make a judgement on the information. For example, "what is your opinion on the influences of R.A Kartini?". The basic competences 3.4 and 4.4 of descriptive text are analyzing and composing. At this level, students should analyze and then evaluate about the influence of R.A Kartini. Students can give their own opinion about the information from the text based on predetermined criteria.

And the last is creating level (C6), researcher found 15 questions with the operational verbs consisting of make, write, and design. Create is to put together or rearrange elements to form a new functional pattern or structure (Anderson & Krathwohl, 2001). The type of question asks student to create something new from existing information. For example, "write a formal written announcement.". The 4.5 basic competence in syllabus of VHS is to compose the text in announcement, in oral form and writing, short and simple, by paying attention to social functions, text structures, and linguistic elements, correctly and in context. The level of creating is the highest level of HOTS, if students are able to create something after learning new information, it can be said that the student is at the highest level. This indicates that students have a good understanding of the information in the textbook. However, this level is the most difficult to construct or even to answer for both the teacher and the student (Daeik & Anter, 2004).

Based on the results of the research, there were several types of operational verbs that were the same but fall into different levels such as the operational verb "explain" which can be found at the understanding level (C2) and analyzing level (C4). For example, the question "why do people make the cards?" is included in the understanding level (C2) because to answer the question students just need to understand the text and explain about the reason why people make the cards to someone. While the question "why is the warehouse manager mentioned in the memo?" is included in the analyzing level (C4) because in this case, warehouse manager is not person who wrote the memo or intended person of the memo so that students must analyze the reason why the warehouse manager exist in the memo.

Moreover, there were some questions that were similar but at different levels. To be able to know the difference is in the intent of the question and the complexity of the reading material. For example, the question "who is supposed to read the memo?" falls into the remembering level (C1) because we can find the answer in text while the question "who should read Memo D?" falls into the understanding level (C2) because we need to understand the context and then conclude the answer. Therefore, to analyze the level of the question, it is necessary to have a deep understanding and master the concept so that it will be easier to determine the operational verb.

In the English textbook, the Lower Order Thinking Skill (LOTS) category consists of 133 questions, and Higher Order Thinking Skill (HOTS) category consists of 69 questions. Based on the data, the English textbook "Forward an English" was in accordance with Revised Bloom's Taxonomy cognitive levels (remembering, understanding, applying, analyzing, evaluating, and creating) which includes all reading comprehension questions in the textbook. Because of LOTS level was more dominant than HOTS level, so it can

be concluded that the quality of reading comprehension questions in English textbook "Forward an English" was categorized at the low level.

This result supports the previous studies that were conducted by Abidin (2022), Fitriani (2021) and Laila & Fitriyah (2022), which found that the level of reading questions in the English textbook was dominated by LOTS level. Furthermore, according to Laila & Fitriyah (2022), the study's findings revealed that just 25 questions or 18% were included in HOTS, while 117 questions or 82% of all reading comprehension questions were included in LOTS, which did not support students' critical thinking. This result is in line with researches from Mizbani, Salehi, & Tabatabaei (2020), NamazianDoost & Hayavimehr (2017), Febriyani, Yunita, & Damayanti (2020), and Atiullah, Fitriati, & Rukmini (2019) which obtained the result that almost all textbooks that had been examined mostly had more questions at the LOTS level. It means that to hone students' comprehension and critical thinking skills, teacher must provide more questions at the HOTS level independently.

## CONCLUSION

Based on the findings and discussion of the research, the conclusions could be drawn as follows:

1. Reading comprehension questions cover all cognitive aspects of the Revised Bloom's Taxonomy which includes remembering level, understanding level, applying level, analyzing level, evaluating level, and creating level.
2. Based on the findings, the most dominant category represented in this English textbook was "remembering" level with 78 questions or 38.6%. The second category was "understanding" level with 51 questions or 25.2%. The third category was "analyzing" level with 34 questions or 16.8%. The fourth category was "evaluating" level with 21 questions or 10.4%. The fifth category was "creating" level with 14 questions or 6.9%. And the lowest category was "applying" level with 4 questions or 2.0%.
3. The total of Lower Order Thinking Skill (LOTS) in the textbook which includes remembering level, understanding level, and applying level is 133 questions with the percentage 65.8%, while the total of Higher Order Thinking Skill (HOTS) in the textbook which includes analyzing, evaluating, and creating level is 69 questions with the percentage 34.2%. In conclusion, the most of the reading comprehension questions in English textbook "Forward an English" are at the low level of the cognitive domain based on Revised Bloom's Taxonomy.

## REFERENCES

- Anderson, L.W., & Krathwohl, D.R. (2001). *A Taxonomy for Learning, Teaching and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. New York: Longman Publishing.
- Babashamsi, P., Bolandifar, S., & Shakib, N. (2013). Various Models for Reading Comprehension Process. *International Journal of Applied Linguistics & English Literature*, 2(6), 150-152.
- Chi Duc, N. (2008). Using Bloom's Taxonomy to Design in-class Reading Questions for Intermediate Students in the Context of Vietnam. *VNU Journal of Science, Foreign Languages*, 24, 175-183.
- Cohen, L. Manion, L., & Morrison, K. (2018). *Research methods in education* (8th ed.). London: Routledge.
- Daiek, D., & Anter, N. (2004). *Critical reading for college and beyond*. Boston: McGraw-Hill.
- Fitri, Y.K., Syarif, H., & Anwwar, D. (2019). The Levels of Questions Used on Reading Test with Regards to Revised Bloom's Taxonomy. *Ta'dib*, 22(1), 27-32
- Hidayat, R. H., & Lestari, Y. B. (2022). Challenges Teachers Face in Applying High Order Thinking Skills. In *3rd Annual Conference of Education and Social Sciences (ACCESS 2021)*. (pp. 61-66). Atlantis Press.
- Kharisma, I., & Lestari, Y. B. (2022). Higher Order Thinking Skills in EYL Classes of a Community Learning Center. In *3rd Annual Conference of Education and Social Sciences (ACCESS 2021)*. (pp. 215-221). Atlantis Press.
- Laila, I., & Fitriyah, I. (2022) An Analysis of Reading Comprehension Questions in English Textbook Based on Revised Bloom's Taxonomy. *Journal of English Teaching (JET)*, 8(1), 72-83.
- Milles, M. B., & Huberman, A. M. (1994). *An Expanded Sourcebook: Qualitative Data Analysis*. London. Sage Publications.
- Ministry of Education and Culture. (2005). *The Regulation of Indonesian Government No. 14 Year 2005 about National Standard of Education*. Jakarta: Ministry of Education and Culture.
- Mutohhari, F., Sutiman, S., Nurtanto, M., Kholifah, N., & Samsudin, A. (2021). Difficulties in implementing 21st century skills competence in vocational education learning. *International Journal of Evaluation and Research in Education (IJERE)*, 10(4), 1229-1236.
- Pourkalthor, O. & Kohan, N. (2013). Teaching Reading Comprehension Through Short Stories in Advance Classes. *Asian Journal of Social Sciences & Humanities*, 2(2).
- Richard, J.C., & Renandya, W., A. (2002). *Methodology in language teaching: An Anthology of Current Teaching*. Cambridge: University Press.
- Richards, J.C. (2001). *The Role of Textbooks in a Language Program*. Cambridge, UK: Cambridge University Press.
- Starr, C. W., Manaris, B., & Stalvey, R. H., (2008). Bloom's Taxonomy Revisited: Specifying Assessable Learning Objectives in Computer Science. *ACM Sigcse Bulletin*, 40(1), 261-265.
- Sugiyono. (2007). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.
- Yusra, K., Lestari, Y. B., & Hamid, M. O. (2022). Teacher agency and the implementation of CEFR-like policies for English for tourism and hospitality: insights from local vocational high schools in Indonesia. *Current Issues in Language Planning*, 23(3), 233-253.