An Analysis of Reading Exercises in EFL Textbook *'English for Nusantara'* Using Revised Bloom's Taxonomy

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Abstract

In the context of 21st-century education, the development of higher-order thinking skills (HOTS) is crucial, particularly as Indonesia's Emancipated Curriculum emphasizes their integration into textbooks. This study analyzed the distribution of lower-order thinking skills (LOTS) and HOTS in WH-questions from the reading exercises of the *'English for Nusantara'* textbook for eighth-grade students based on the Revised Bloom's Taxonomy (Anderson & Krathwohl, 2001). Using a qualitative descriptive design employing content analysis was applied to WH-questions presented in Chapters 1 to 5 of the textbook. The analysis identified a total of 86 WH-questions, of which 72 (83.72%) were categorized as LOTS and 14 (16.28%) as HOTS. The most frequently represented cognitive dimension was remembering (C1), while applying (C3) appeared the least. These findings suggest that the textbook predominantly emphasizes LOTS, particularly factual recall and basic comprehension, rather than fostering HOTS. The study provides important implications for textbook authors, teachers, and policymakers to enhance HOTS-oriented instruction and to promote more critical and reflective English language learning.

Keywords: lower-order thinking skills, higher-order thinking skills, Revised Bloom's Taxonomy, reading exercises, WH-questions

INTRODUCTION

In the 21st century, education must adapt to the growing demand for developing students' critical and creative thinking, which are essential to achieving learning objectives and addressing global challenges (Fatimatuzzahroh et al., 2021; Songkram, 2015). English plays a crucial role in this context as it provides access to knowledge, facilitates cross-cultural communication, and supports international collaboration (Haryadi & Aminuddin, 2023). Moreover, students are expected to master the four key competencies of critical thinking, communication, and creativity (National Education Association, 2012), while textbooks remain indispensable resources that not only support comprehension but also guide teachers in designing effective instruction (Abidasari et al., 2021; Poedjiastutie et al., 2018).

To enhance education quality, the Indonesian Ministry of Education, Culture, Research, and Technology (MoERCT) introduced the Emancipated Curriculum, which emphasizes project-

based learning, inquiry, real-world application, and technology integration to foster creativity and innovation, while also promoting critical thinking, problem-solving, communication, and collaboration (Kemdikbud, 2022; Yamin & Syahrir, 2020). In line with these aims, Bloom's Taxonomy, first introduced in 1956 and revised by Anderson and Krathwohl (2001), provides a framework for classifying cognitive skills into lower-order thinking skills (LOTS) including remembering (C1), understanding (C2), and applying (C3), and higher-order thinking skills (HOTS) including analyzing (C4), evaluating (C5), and creating (C6), with HOTS being central to fostering problem solving and innovation in modern education. Nevertheless, studies reveal that Indonesian EFL textbooks still prioritize LOTS over HOTS (Parel & Sujarwati, 2024; Maryamah et al., 2024; Jansen & Möller, 2022), a misalignment that is concerning given Indonesia's weak performance in international assessments such as PISA 2022, where only 25% of students achieved level 2 in reading compared to 74% in OECD countries (OECD, 2022).

To address these challenges, MoERCT introduced the English for Nusantara textbook to promote holistic, expressive, and progressive learning. However, previous studies of other Emancipated Curriculum textbooks, such as Bright for Grade IX and Grade VII materials, indicate that LOTS continue to dominate and that analyses have mostly been limited to reporting proportions without examining the specific cognitive dimensions assessed (Parel & Sujarwati, 2024; Maryamah et al., 2024). Therefore, this study examines the distribution of LOTS and HOTS in the reading exercises of English for Nusantara Grade VIII by focusing on WH-questions, which are particularly relevant because they encourage comprehension, analysis, and reasoning, making them effective for assessing HOTS (Nephawe, 2023). Specifically, the research addresses two questions: (1) To what extent are LOTS and HOTS reflected in the reading exercises? and (2) Which cognitive dimension appears most frequently within the Revised Bloom's Taxonomy? The findings are expected to provide theoretical insights into how textbooks contribute to students' cognitive development, practical guidance for teachers in designing lessons that foster higher-order thinking, and valuable input for future textbook development to strengthen HOTS integration. This study is limited to WH-questions in the reading and *"Your Turn":* Reading sections of Chapters 1–5 and Unit 1–3 of the '*English for Nusantara'* Grade VIII textbook, published by MoERCT in 2022, as these chapters present introductory materials and progressive reading activities crucial for literacy and cognitive growth.

METHOD

This study employed a descriptive qualitative approach to analyze WH-questions (what, who, where, when, why, which, and how) in the reading section and *"Your Turn"*: reading section of the VIII grade textbook *'English for Nusantara'*. The analysis was based on the Revised Bloom's Taxonomy (Anderson & Krathwohl, 2001), focusing on six cognitive dimensions: C1 (remembering), C2 (understanding), C3 (applying), C4 (analyzing), C5 (evaluating) and C6 (creating). The textbook which consisted of 311 pages and was obtained from SIBI, contained five chapters: *(1) Celebrating Independence Day. (2) Kindness Begins with Me, (3) Love Our World, (4) No Littering, and (5) Embrace Yourself.* It was selected because it aligned with genre-based Emancipated Curriculum and Learning Objectives for Phase D. In addition, the textbook was considered relevant to deeper analytical abilities. Therefore, the study focused on Chapters 1–5 and Units 1–3. The data were analyzed through content analysis by categorizing the questions into two groups: LOTS (C1-C3) and HOTS (C4-C6) (Krippendorff, 2004). The analysis followed Miles et al. (2014) interactive model, which consisted of three stages. First, data condensation was carried out by collecting and classifying WH-questions into C1-C6 using codes Ch (chapter), U (unit), S (section), and P (page), and the classification was verified by three raters through a majority vote system. Second, data display involved presenting the classified results in lists, tables, and charts to illustrate the distribution of questions across chapter, units and cognitive levels, as well as calculating the frequency and percentage of LOTS and HOTS using the formula $X = (F/N) \times 100\%$, where X = the result of percentage, F = frequency, and N = total number of WH-questions. Third, conclusion drawing/verification was conducted by interpreting the results to identify distribution patterns of thinking skills in WH-questions within the reading exercises.

FINDINGS AND DISCUSSION

FINDINGS

The Distribution of LOTS and HOTS in Reading Exercises

The researcher identified 18 reading exercises in Chapters 1–5 and Units 2–3, consisting of 15 reading sections (11 containing WH-questions and 4 without WH-questions) and 3 *"Your Turn"*: reading sections. The questions identified comprised *what, who, where, when, why, which, and how,* with a total of 86 questions, including 65 from the reading sections and 21 from the *"Your Turn"*: reading sections. The classification results revealed that 72 questions fall under the category of lower-order thinking skills (LOTS), whereas 14 questions belong to higher-order

thinking skills (HOTS). In addition to text-based context, several exercises were also supported by visual aids in the form of images.
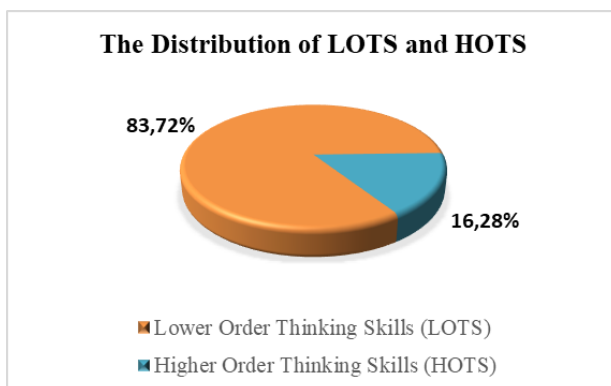
The Distribution of LOTS and HOTS

83,72%

16,28%

■ Lower Order Thinking Skills (LOTS)
■ Higher Order Thinking Skills (HOTS)

Figure 1. The Percentages of LOTS and HOTS

The analysis presented in Figure 1 demonstrates a cognitive level imbalance, with LOTS dominating at 83,72% and HOTS accounting for only 16,28%. These findings indicate that the textbook places greater emphasis on LOTS, while students are provided with relatively limited opportunities to develop HOTS. To provide a more detailed view, Figure 2 illustrates the distribution of LOTS and HOTS across the six cognitive levels of the Revised Bloom's Taxonomy.
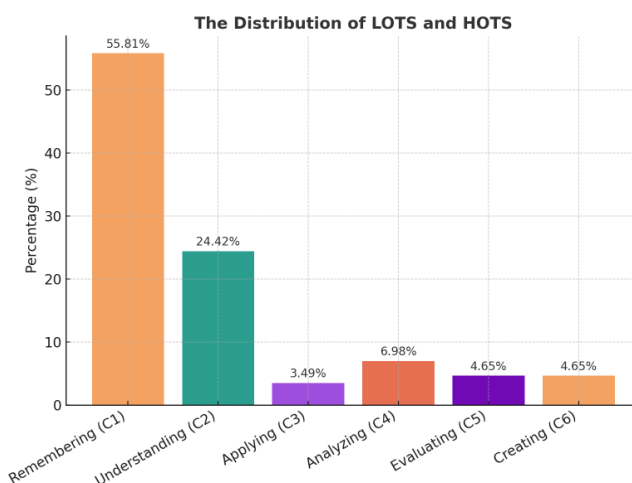
The Distribution of LOTS and HOTS

55.81%

24.42%

3.49%   6.98%   4.65%   4.65%

Remembering (C1) Understanding (C2) Applying (C3) Analyzing (C4) Evaluating (C5) Creating (C6)

Percentage (%)

Figure 2. The Distribution of LOTS and HOTS in Reading Exercises

Within the LOTS category, the Remembering level (C1) dominates with 48 questions (55,81%), focusing on recalling factual information such as characters, places, and times. For instance, in Chapter 1, Unit 3, Section 2: Reading, Page 54-55, the question *"Who could be the participant in the fun games?"* requires students to engage in attentive reading to identify explicit information. Furthermore, the understanding level (C2) constitutes the second highest proportion with 21 questions (24,42%), requiring students to comprehend the content of the text and restate it. An

example can be found in Chapter 2, Unit 2, Section 3: Reading, Page 91-93, where the question *"Describe how the big white birds recognized the Ugly Duckling (line 23)"* prompts interpretation and conveys a moral lesson on self-acceptance. In addition, the applying level (C3) comprises only 3 questions (3,49%), which emphasize the transfer of textual knowledge to real-life contexts. For example, in Chapter 3, Unit 2, Section 6 *"Your Turn"*: Reading, Page 159-160, the question *"If you have old books that you do not use any longer, what do you do with them?"* requires students to connect the text with practical actions.

In contrast, HOTS are represented by only three cognitive levels, each with relatively small proportions. The analyzing level (C4) is the most dominant, with 6 questions (6,98%). For instance, in Chapter 4, Unit 2, Section 3: Reading, Page 209, the question *"Why did both turtles look sad?"* requires students to examine implicit cause-and-effect relationships through visual cues and character expressions. The evaluating level (C5) is represented by 4 questions (4,65%), such as in Chapter 5, Unit 2, Section 4: Reading, Page 264, with the question *"What do you learn from the story?"* which encourages students to identify moral values and relate them to real-life experiences. Similarly, the creating level (C6) also consists of 4 questions (4,65%). An example can be found in Chapter 1, Unit 2, Section 7 *"Your Turn"*: Reading, Page 51, with the questions *"In a costume competition, what are the possible criteria for scoring the contestants? Explain your reasons."* This type of question stimulates students to generate original ideas and justify them, thereby fostering creativity, confidence, and the ability to read material with personal perspectives. Overall, the distribution reveals a significant imbalance. LOTS, particularly at the remembering and understanding levels, dominate extensively, while HOTS appear in only a limited proportion. Thus, while the textbook provides a strong foundation for developing literal comprehension skills, it remains insufficient in offering adequate opportunities for students to cultivate higher-order abilities such as critical and creative thinking.

The Most Frequently Represented Cognitive Dimension in Reading Exercises

Table 4.1 The Frequency and Percentage of Each Cognitive Dimension

No.	Level of Cognitive Dimension		Total frequency of each cognitive level	Percentage
1	Remembering	(C1)	48	55,81%
2	Understanding	(C2)	21	24,42%
3	Analyzing	(C4)	6	6,98%

4	Evaluating	(C5)	4	4,65%
5	Creating	(C6)	4	4,65%
6	Applying	(C3)	3	3,49%

Based on Table 4.1, the most frequently occurring cognitive dimension in the reading exercises is LOTS at the C1 (remembering) level, accounting for 48 questions or 55,81% of the total. This is followed by the C2 (understanding) level, which comprises 21 questions or 24,42%. In contrast, the C3 (applying) level appears least frequently within the LOTS category, with only 3 questions (3,49%), a proportion lower than any of the HOTS levels. Among the HOTS categories, the C4 (analyzing) level shows the highest frequency, with 6 questions (6,98%), while both C5 (evaluating) and C6 (creating) are represented by 4 questions each (4,65%). These findings suggest that the reading exercises are predominantly focused on LOTS, particularly at the remembering and understanding levels, with relatively limited emphasis on the higher-order cognitive processes.

DISCUSSION

The Proportions of LOTS and HOTS Reflected in Reading Exercises

The findings of this study indicate that WH-questions in the reading exercises of the *'English for Nusantara'* textbook for grade VIII are predominantly LOTS, comprising 83,72%, while HOTS account for only 16,28%. This distribution suggests that the textbook's reading exercises place greater emphasis on lower-level cognitive processes, particularly the ability to recall and comprehend information from texts. The results are consistent with previous Indonesian studies, Laila and Fitriyah (2022) reported that 83% of reading exercises in junior high textbook were LOTS, and Fakhrillah and Suharyadi (2025) found a similar pattern in the *'English for Nusantara'* textbook for Grade VII, where LOTS comprised 89%, and Atiullah et al. (2019) also observed a predominance of LOTS. In contrast, Sucipto and Cahyo (2019) reported a relatively balanced distribution in junior high textbooks, with LOTS at 49% and HOTS at 51%. In the international context, comparable results have also been reported. Khamta et al. (2024) in Thailand found that 72,44% of reading exercises were classified as LOTS. Barashid (2020) in Saudi Arabia similarly observed a relatively limited representation of HOTS in WH-questions within EFL Textbooks approximately 58%. These comparisons indicate that the predominance of LOTS is a widespread phenomenon, particularly in Indonesia, although the proportion of HOTS varies across countries.

The findings indicate that LOTS function as a necessary foundation for HOTS by helping students focus on essential details and main ideas in the text, which form the basis for engaging in

more complex reasoning. However, an excessive emphasis on LOTS without sufficient balance with HOTS may hinder the development of advanced skills and deeper reading comprehension. Limited exposure to HOTS items leaves students less trained in interpretation, critical analysis, and evaluation. Therefore, LOTS and HOTS should be regarded as complementary in strengthening students' reading proficiency. This condition is particularly important given that Grade VIII represents a transitional stage from the mastery of basic competencies to the development of more complex cognitive skills. Maintaining a balance between LOTS and HOTS is essential to prepare students for future cognitive challenges while also enhancing text comprehension and vocabulary development. Furthermore, the dominance of LOTS appears misaligned with the principles of the Emancipated Curriculum, which aims to cultivate the *Profil Pelajar Pancasila.*

The Dominance of Cognitive Dimension in Reading Exercises

The findings of this study indicate that LOTS dominate significantly, with the remembering (C1) accounting for the largest proportion at 55,81%. This result is consistent with the study conducted by Laila and Fitriyah (2022), which reported that 49% of questions were at the C1 level. Items at this level require students to recall facts and details from the text. Such a strategy was likely chosen by the textbook authors to ensure mastery of factual knowledge and vocabulary, while also reflecting the relative ease of constructing and assessing recall based questions. However, the predominance of C1 limits students' opportunities to practice deeper interpretation and develop critical thinking skills. At the next level, Understanding (C2) accounts for 24,42%, requiring students to interpret the meaning of the text. Fakhrillah and Suharyadi (2025) found that the proportion of C2 in several chapters was comparable to or even exceeded that of C1, while Igbaria (2013) emphasized that literal comprehension remains the primary focus in reading exercises. The findings of this study show the same pattern, although C2 remains in second place after C1. This means that reading questions focus more on literal comprehension than on higher-level reasoning.

HOTS were found in limited proportions. Analyzing (C4) appeared only 6,98%, indicating the small number of questions that required students to break down information or identify relationships between ideas. This percentage is comparable to the findings of Laila and Fitriyah (2022), who reported 7% for C4. Meanwhile, Evaluating (C5) and Creating (C6) each accounted for only 4,65%, which is consistent with a previous study that also found these levels to be underrepresented. Interestingly, applying (C3) is the lowest proportion at 3,49%. This result differs

from most studies, which typically identified Creating (C6) as the least represented category. The limited variation in applying questions suggests a lack of opportunities for students to use their knowledge in new contexts. This is significant because applying serves as a bridge between LOTS and HOTS by training students to apply their understanding to problem solving, this a key in the 21st century skill emphasized in the Emancipated Curriculum.

The predominance of LOTS in the *'English for Nusantara'* textbook can be explained by several factors. First, the nature of WH-questions, which emphasize factual information such as who, what, where, and when, tends to generate questions at the C1 or C2 levels. Fakhrillah and Suharyadi (2025) emphasized that the pattern reflects the textbook's focus on the mastery of basic cognitive skills. Second, although the textbook was developed to align with the Emancipated Curriculum, its question pattern remains influenced by earlier curricula that emphasized factual knowledge. Third, practical constraints such as limited instructional time and assessment formats encourage textbook authors to construct simple questions. Barashid (2020) further explained that HOTS-oriented questions are often avoided because they require specific expertise, while Laila and Fitriyah (2022) noted that HOTS items take more time for students to complete.

This condition highlights a gap between the curriculum objectives and the textbook content. The dominance of LOTS is not fully aligned with the principles of the Emancipated Curriculum, which emphasizes the development of *Profil Pelajar Pancasila,* particularly in the dimensions of critical and creative thinking. This curriculum was introduced in response to Indonesia's low performance in international assessments such as PISA, especially in literacy and numeracy. Therefore, the findings of this study have important implications for both textbook development and classroom practice. Textbook authors need to balance the distribution of questions by incorporating more items at the C3 to C6 levels. For example, the *"Your Turn":* reading section could be revised to include problem-solving. At the same time, teachers also play a vital role in supplementing the textbook content so that the objectives of the Emancipated Curriculum in equipping students with 21st-century skills can be more effectively achieved.

CONCLUSION

This study analyzed the distribution of cognitive levels in the reading exercises of the '*English for Nusantara'* textbook for junior high school using Revised Bloom's Taxonomy (C1–C6), which is grouped into lower-order thinking skills (LOTS) and higher-order thinking skills (HOTS). From 86 WH-questions across 15 reading sections and 3 *"Your Turn":* reading sections, 83.72% were

categorized as LOTS and only 16.28% as HOTS, indicating an imbalance that answers the first research question on their proportion. Within LOTS, C1 (remembering) was the most dominant at 55.81%, followed by C2 (understanding) at 24.42% and C3 (applying) at 3.49%, while HOTS included C4 (analyzing) at 6.98% and both C5 (evaluating) and C6 (creating) at 4.65%, which addresses the second research question concerning the most frequent cognitive level. Although the *"Your Turn"*: reading section conceptually supports HOTS development and aligns with the student-centred learning approach in the Emancipated Curriculum (Kemdikbud, 2022), the analysis shows it remains dominated by LOTS, particularly C1 and C2, offering limited opportunities for critical, analytical, or creative thinking. Overall, the textbook emphasizes LOTS, suggesting that its reading exercises need improvement to better support the curriculum's goal of fostering higher-order thinking.

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