

Evaluating Cognitive Levels of Reading Comprehension Questions in Ninth Grade English Textbooks Using Revised Bloom's Taxonomy

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Abstract

Reading comprehension remains a critical challenge in English as a Foreign Language (EFL) education, particularly regarding the cognitive levels of questions presented in textbooks. This study aims to evaluate the cognitive levels of reading comprehension questions in the ninth-grade English textbook "Think Globally, Act Locally," published by the Indonesian Ministry of Education and Culture in 2018, using the Revised Bloom's Taxonomy framework. The research employs qualitative content analysis to systematically examine and categorize all reading comprehension questions according to six cognitive domains: remembering, understanding, applying, analyzing, evaluating, and creating. A total of 60 reading comprehension questions were analyzed across multiple units of the textbook. The findings reveal that 63.33% of questions focus on lower-order thinking skills (LOTS), while only 36.67% promote higher-order thinking skills (HOTS). Specifically, remembering and applying questions dominate with 28.33% each, while analyzing (15%), evaluating (10%), and creating (11.67%) questions are underrepresented. This imbalance indicates limited opportunities for students to develop critical thinking, problem-solving, and creativity skills essential for 21st-century learning. The findings provide crucial insights for educators, curriculum developers, and policymakers to improve teaching materials alignment with national curriculum goals that emphasize critical thinking and analytical skills development.

Keywords: Reading comprehension, cognitive levels, Revised Bloom's Taxonomy, higher order thinking skill (HOTS), lower order thinking skill (LOTS).

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INTRODUCTION

Teaching English as a foreign language is one of the largest educational fields worldwide (Richards, 2001), with reading comprehension being a particularly challenging skill to teach. It involves vocabulary learning and deeper language understanding, both essential for successful text comprehension (Perfetti & Adlof, 2012; Tyas et al., 2020; Ulum, 2023). This raises a key question: do textbooks influence students' reading comprehension?

For ninth-grade students transitioning to advanced English levels, textbook quality is critical. Effective textbooks should promote cognitive development, critical thinking, and cultural awareness (Qasrawi & Beni Abdelrahman, 2020; Widodo, 2017). Encouraging higher-order thinking helps students not only adapt to modern challenges but also grow as individuals (Brookhart, 2010). Higher-order thinking includes skills like transfer, critical thinking, and problem solving (Brookhart, 2010; Rachmatia et al., 2024; Bavli, 2023), and surpasses basic recall or understanding.

These thinking skills fall under Bloom's Taxonomy, which classifies cognition into lower-order (LOTS) and higher-order thinking skills (HOTS). This study adopts the Revised Bloom's Taxonomy (Anderson & Krathwohl, 2001), which includes remembering, understanding, and applying as LOTS, and analyzing, evaluating, and creating as HOTS.

Teachers play a key role in using textbooks to develop these skills (Feng, 2013). They should evaluate and provide feedback on textbook content to ensure it meets student needs (Yuen, 2011). While previous research (e.g., Anizain, 2024; Ramadhani, 2023; Indah & Setyowati, 2022; Laila & Fitriyah, 2022) has assessed textbooks, few have specifically analyzed reading comprehension questions in *Think Globally, Act Locally* (Kemendikbud RI, 2018).

This government-published textbook is widely used across Indonesia and is an official learning resource for ninth-grade students. Despite its wide distribution, there is limited research on how well it supports the development of HOTS through its reading comprehension tasks. This study aims to fill that gap by analyzing the cognitive levels of its questions using the Revised Bloom's Taxonomy framework, providing insight for educators, curriculum developers, and policymakers.

Teaching English as a Second Language and Reading Comprehension

Teaching English as a foreign language (EFL) involves more than learning grammar or vocabulary—it includes developing complex skills like reading comprehension, which requires understanding meaning, making inferences, and analyzing texts (Richards, 2001; Perfetti & Adlof, 2012). For ninth-grade students, this skill is especially important as they transition from basic to advanced reading, preparing for higher education and real-life communication (Widodo, 2017). However, limited vocabulary and unfamiliar structures can make reading in English challenging, particularly without effective materials. Textbooks play a key role in shaping reading ability; if they only offer simple recall questions, students may miss out on critical thinking opportunities. Since reading is also tied to cognitive development, well-designed textbooks should not only build language skills but also support reasoning and problem-solving, helping learners become strategic, independent readers (Grabe & Stoller, 2011).

The Role of Textbooks in Language Learning

Textbooks are a central component of language learning in Indonesia, where government-published materials like *Think Globally, Act Locally* are widely used and play a key role in guiding teachers and students through curriculum-based content and activities (Williams, 1983). As the primary source of English input for many students, textbook quality is crucial—they should provide a balance of language exposure, practice, and cognitive challenges to support critical thinking and deeper learning (Widodo, 2017). However, textbooks vary in focus; some emphasize grammar or vocabulary, while others promote communication or analysis, which directly affects the skills students develop. Textbooks filled with factual questions may lead to rote learning, whereas those that foster questioning and creativity better prepare learners for real-life problem-solving (Tomlinson, 2011). Additionally, culturally and contextually relevant content helps students connect with the material while gaining global awareness (McGrath, 2013). Given their widespread use and alignment with national standards, government-issued textbooks have significant influence on students' language and cognitive development in Indonesia.

Higher-Order Thinking Skills (HOTS) and Their Educational Importance

Higher-order thinking skills (HOTS)—which include analyzing, evaluating, and creating—go beyond basic memorization and understanding, enabling students to think critically, solve problems creatively, and apply knowledge in new contexts (Brookhart, 2010). These skills are essential for success in both academic and real-world settings, helping students

make informed decisions and adapt to change (Bavlı, 2023). In language learning, HOTS allow students to use English as a tool for thinking, not just communication, as they interpret texts, evaluate ideas, and generate original responses (Rachmatia et al., 2024). This aligns with 21st-century education goals that emphasize critical thinking and creativity. However, many English textbooks still prioritize lower-order thinking skills (LOTS), focusing mainly on recall and comprehension. This limits students' cognitive development and readiness for future challenges. Therefore, educators and curriculum designers must ensure textbooks and classroom tasks support both LOTS and HOTS, with increasing emphasis on HOTS as students advance (Brookhart, 2010; Febriyani et al., 2020).

Bloom's Taxonomy in EFL Contexts

Bloom's Taxonomy, originally developed by Bloom et al. (1956) and later revised by Anderson and Krathwohl (2001), categorizes cognitive skills into lower-order thinking skills (LOTS)—remembering, understanding, and applying—and higher-order thinking skills (HOTS)—analyzing, evaluating, and creating. Widely used in education, the revised taxonomy (C1–C6) helps teachers design objectives, lessons, and assessments that engage students at different cognitive levels. In EFL classrooms, it supports both language and cognitive development by guiding instruction from simple recall to complex tasks like critical analysis and creative expression. Research shows that applying Bloom's Taxonomy effectively enhances critical thinking and deeper learning (Feng, 2013). It is also useful for evaluating textbooks, revealing that many government-published EFL materials still overemphasize LOTS at the expense of HOTS (Febriyani et al., 2020). This imbalance limits students' opportunities to develop essential problem-solving and reasoning skills.

The urgency of this research stems from Indonesia's national curriculum reform that emphasizes 21st-century skills, yet current textbooks may not adequately support these goals. Previous research by Febriyani et al. (2020) and Laila & Fitriyah (2022) found similar LOTS dominance in other Indonesian EFL textbooks, but specific analysis of "Think Globally, Act Locally" remains limited, creating a significant research gap. The novelty of this study lies in its comprehensive cognitive analysis of this widely-used government textbook using the Revised Bloom's Taxonomy framework.

The objectives are to: (1) identify the distribution of cognitive levels in reading comprehension questions, (2) evaluate the balance between LOTS and HOTS, and (3) provide recommendations for curriculum improvement. The benefits include guiding educators in supplementing textbook limitations, informing curriculum developers about necessary revisions, and supporting policymakers in making evidence-based decisions about textbook quality standards. Therefore, teachers and curriculum developers should use the taxonomy not only to assess textbooks but also to design engaging, HOTS-oriented activities like debates, projects, and creative writing tasks (Yuen, 2011), promoting more effective and well-rounded English instruction.

METODE PENELITIAN

This study employed a qualitative content analysis to examine the reading comprehension questions in the ninth-grade English textbook *Think Globally, Act Locally*, published by the Indonesian Ministry of Education and Culture in 2018. Content analysis was used to categorize the cognitive levels of the questions based on the Revised Bloom's

Taxonomy framework (Anderson & Krathwohl, 2001; Krippendorff, 2019). The textbook served as the sole data source, with no involvement of human participants.

Reading comprehension questions were systematically extracted from each chapter and recorded with their page numbers and context. A checklist based on the six cognitive domains—remembering, understanding, applying, analyzing, evaluating, and creating—was used to classify each question (Anderson & Krathwohl, 2001; Ary et al., 2010). Data analysis involved coding the questions and calculating the frequency and percentage of each cognitive category to evaluate the distribution of LOTS and HOTS. Ethical considerations were minimal, as only publicly available material was used, and academic standards for citation and objectivity were followed.

HASIL DAN PEMBAHASAN

The analysis identified a total of 60 reading comprehension questions across several units of the textbook. These questions were classified according to the six cognitive levels of the Revised Bloom's Taxonomy: Remembering (C1), Understanding (C2), Applying (C3), Analyzing (C4), Evaluating (C5), and Creating (C6) (Anderson & Krathwohl, 2001).

Table 1. Reading comprehension questions presented in the book

Cognitive Domain	Total Questions	Percentage
Lower Order Thinking Skills (LOTS)	C1 Remember	28,33%
	C2 Understand	6,67%
	C3 Apply	28,33%
Higher Order Thinking Skills (HOTS)	C4 Analyze	15,00%
	C5 Evaluate	10,00%
	C6 Create	11,67%

Out of 60 questions, 38 belong to the LOTS domain, and 22 belong to the HOTS domain. More than half of the questions are in the LOTS domain. Among the first three levels of LOTS, C1 and C3 has 17 questions out of the total 60, making it the level with the highest number of questions in this study. This breakdown shows that lower-order thinking skills (LOTS: C1–C3) has 63.33% of all questions, while higher-order thinking skills (HOTS: C4–C6) for 36.67%.

Discussion

The dominance of LOTS in the Think Globally, Act Locally textbook reflects a broader trend in Indonesian EFL materials, where memorization often outweighs critical thinking (Febriyani et al., 2020). While foundational skills are important, overemphasis on LOTS may hinder the development of students' analytical and creative abilities, which are crucial in modern education and life (Feng, 2013; Brookhart, 2010). Without regular exposure to HOTS tasks, students may struggle to transfer knowledge beyond the classroom and engage with complex real-world issues (Seman et al., 2017). This is especially problematic for students with lower cognitive abilities who rely heavily on teacher support (Febrina et al., 2019).

The study also reveals a misalignment between the textbook and Indonesia's national curriculum, which emphasizes HOTS to foster critical, creative, and independent learners. Similar to the findings of Febriyani et al. (2020) and Laila and Fitriyah (2022), this textbook

contains mostly LOTS-oriented questions, indicating a gap between curriculum goals and actual classroom materials.

Textbook design and teacher mediation both play essential roles in bridging this gap. As Tomlinson (2011) notes, effective textbooks should challenge students cognitively while providing rich language input. However, many teachers have limited understanding of HOTS and require proper training to implement higher-order tasks effectively (Seman et al., 2017). Supporting teachers with resources and professional development is key to achieving a better balance between LOTS and HOTS in practice.

In summary, the analysis shows a strong bias toward LOTS in the reading comprehension questions, raising concerns about students' opportunities for deeper learning. To meet national and international educational standards, textbooks and teaching practices must more intentionally promote higher-order thinking (Atiullah et al., 2019).

CONCLUSION

This study found that the ninth-grade English textbook *Think Globally, Act Locally*, published by the Ministry of Education in 2018, predominantly features lower-order thinking skills (LOTS) in its reading comprehension questions, with limited inclusion of higher-order thinking skills (HOTS). This imbalance does not fully meet the needs of students or align with the goals of the national curriculum, which emphasizes critical thinking and problem-solving. The dominance of LOTS mirrors previous findings on Indonesian government-issued textbooks and suggests limited opportunities for students to develop analytical, evaluative, and creative skills essential for 21st-century learning (Brookhart, 2010; Bavli, 2023).

Textbooks play a crucial role in shaping learning outcomes. When they focus mainly on recall-based questions, students miss out on deeper engagement and skill development (Widodo, 2017). To better support students' cognitive growth, textbook content should be revised to include a more balanced mix of LOTS and HOTS. By integrating more HOTS-oriented tasks, educational materials can better prepare students for higher education, real-world challenges, and global competitiveness.

In sum, while *Think Globally, Act Locally* is a widely used and valuable resource, its emphasis on LOTS highlights a clear need for improvement. Strengthening the presence of HOTS in reading comprehension questions is essential for promoting well-rounded cognitive development and supporting the long-term success of Indonesian students.

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