ISSN 2656-9531
JOURNAL OF LANGUAGE, LITERATURE, AND TEACHING (JLLTE)
Vol. 7 No. 1, April – July 2025, pp. 37 - 46

THE ALIGNMENT OF LOTS AND HOTS IN SUMMATIVE ASSESSMENTS WITHIN THE MERDEKA CURRICULUM

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Abstract

This study examines the alignment of Lower Order Thinking Skills (LOTS) and Higher Order Thinking Skills (HOTS) in summative assessments within the context of the Merdeka curriculum at SMP Amore Prime School. The research utilizes a descriptive quantitative approach, analyzing English assessment items for grade 8 students in the 2024-2025 academic year. Data was collected from 51 summative test items, categorized according to Bloom's revised taxonomy, with a focus on the distribution of LOTS and HOTS. The findings reveal a dominance of LOTS-based items (70.6%) over HOTS-based items (29.4%), indicating a gap in the ideal implementation of the Merdeka curriculum, which emphasizes critical thinking, creativity, and independent learning. Although the assessment items reflect an attempt to integrate both cognitive levels, the imbalance suggests that traditional rote-learning practices still prevail, particularly in assessing foundational knowledge. This study highlights the need for greater emphasis on HOTS in language assessments to fully align with the goals of the Merdeka curriculum and support the development of students' critical thinking and problem-solving skills

Keywords: Bloom's Taxonomy, Summative Assessment, Merdeka Curriculum, HOTS, LOTS

Introduction

Implementing assessment in language teaching and learning is essential because it is an ongoing process that provides necessary feedbacks that benefit teachers and students. The students obtain direct learning evaluation through the assessment, and such evaluation allows them to measure their learning progress concerning their

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JOURNAL OF LANGUAGE, LITERATURE, AND TEACHING (JLLTE)
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weaknesses and strengths (Brown & Abeywickrama, 2019). Consequently, this direct access to their learning progress provides the students with both learning motivation and targeted assistance to improve their language competence. The implementation of assessment also provides the teachers with certain assistance. The students' learning progress reflected in assessment results suggests teaching feedback and adjustment to the teachers to enhance instructional strategies for improving the student's future learning. As instructional strategies and feedback are constantly provided to the teachers to improve teaching adjustments and learning progress, implementing assessment provides more precise direction to teachers and students to achieve the curriculum goals (Rea-Dickins & Gardner, 2000). Hence, the assessment must be correctly and carefully designed to support language learning activities.

One key feature of a well-designed language assessment is the integration of Bloom's taxonomy to ensure a holistic evaluation of the student's language competence. The application of Bloom's taxonomy in language assessment allows the teachers to evaluate not only the student's foundational knowledge (LOTS) but also the practical application of the knowledge (HOTS) (Anderson & Krathwohl, 2001). Integrating Bloom's taxonomy in language assessment also coincides with the current implementation of the Merdeka curriculum in Indonesia, which emphasizes student-centred learning, character development, literacy, numeracy and 21st-century competencies such as critical thinking and creativity (Irwan & Aslan, 2024). However, there are challenges among Indonesian language classroom concerning the distribution of LOTS and HOTS in the assessment items. Faradella (2024) discovered that the dominant test items found in Indonesia's language assessment are characteristically LOTS focusing on recall and memorisation.

The finding pertaining to the dominance of LOTS items in language assessment is also prevalent in many junior high schools in Indonesia. The primary cause of this discrepancy is often attributed to the lack of teacher training in HTOS-based assessment construction (Rampean et al., 2022). Hence, despite the implementation of the Merdeka curriculum focusing on developing high order skills, the actual assessment practices often

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fail to accommodate the development of such skills. As a result, most assessments given to the students primarily focusing on the theoretical understanding rather than their ability to apply such knowledge in authentic contexts. This distribution discrepancy has been examined by several studies. In the investigation of English reading workbooks, Widiastuti and Mbato (2025) discovered that LOTS-based questions dominated in the reading books workbooks. On the other hand, Aziz et al. (2024) found that summative assessments at the junior high school level were predominantly centred on LOTS. Furthermore, in terms of digital assessment implementation, Waliyuddin and Sulisworo (2022) noted that due to the distribution discrepancy, the digital assessment design must consider that balance of LOTS and HOTS to achieve a holistic and effective language assessment.

In addition to the focus on distribution of LOTS and HOTS in the summative assessment items, this current research aims to investigate it in light of the Merdeka curriculum implementation. This study focuses its investigation on the summative assessment items of SMP Amore Prime School particularly on the LOTS and HOTS distribution in relation to the Merdeka curriculum implementation. Consequently, the stance of the current study set itself apart from the previous studies, which provided little emphasis on the current Merdeka curriculum. Hence, this study aims to discover the alignment between the implementation of a proper language assessment in relation to curriculum mandates at junior high school level. Furthermore, the findings of this research are expected to contribute to not only the holistic development of students' language competence and improvement classroom practices, specifically assessment design, but also policy implementation and curriculum-aligned assessment development.

Method

Participants/Subjects/Population and Sample

The research was conducted at SMP Amore Prime School focusing on summative assessments given to grade 8 students consisting of 36 students during the 2024-2025

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academic year. Applying purposive sampling, the data was collected from the summative assessment items designed by the teacher following the Merdeka curriculum to ensure the relevance of the data to the research's goals (Patton, 2015). The data sources included both printed and digital formats of English assessment items covering a variety of questions such as multiple-choice, fill-in-the blanks and short essays.

Instruments

This study employed a descriptive quantitative approach to examine the distribution of Bloom's revised taxonomy of LOTS and HOTS in the English summative assessment in relation to the implementation of the Merdeka curriculum. The application of this approach suits the nature this research as it focuses on analysing the percentage of the distribution of LOTS and HOTS in the summative assessment items in light of the Merdeka curriculum implementation (Creswell & Creswell, 2017).

Data Analysis Procedure

The data collection procedure focuses on document analysis ensuring that the test items were categorised according to revised Bloom's taxonomy of Anderson and Krathwohl (2001). Then, the test items were coded into LOTS (remembering, understanding, applying) and HOTS (analysing, evaluating, creating). In addition, the coding process was implemented by focusing on the common words related to each cognitive level of LOTS and HOTS as described in the Table 1. Afterwards, the data analysis employed a two-phase process such as data classification according to the taxonomy recommended by Anderson and Krathwohl (2001) and quantification of the distribution in terms of frequency and percentage. The quantification of LOTS and HOTS distribution was then interpreted in light of the Merdeka curriculum implementation by applying descriptive statistics (Miles et al. 2014). The data presentation of the LOTS and HOTS distribution in terms of the frequency and percentage can be displayed as follows:

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Table 1. Framework of the LOTS and HOTS Categorisation

Lower Order Thinking Skills (LOTS)			Higher Order Thinking Skills (HOTS)		
Remembering (C 1)	**Understanding (C 2)**	**Applying (C 3)**	**Analyzing (C 4)**	**Evaluating (C 5)**	**Creating (C 6)**
Define, identify, list, name, match, label, recall, recognize, repeat, state,	Explain, summarize, describe, interpret, paraphrase, classify, compare, discuss, restate, illustrate	Apply, use, demonstrate, implement, solve, perform, practice, construct, show	Analyze, differentiate, compare, contrast, categorize, break down, examine, identify relationships, distinguish, investigate	Evaluate, assess, justify, recommend, judge, argue, defend, appraise, validate	Create, design, compose, construct, formulate, plan, develop, invent, generate, produce

The percentage of the LOTS and HOTS distribution was obtained through the calculation from the categorisation of the data as indicated in the table above. The following equation was applied to calculate the percentage of the LOTS and HOTS distribution in the summative test items:

$$\boldsymbol{Pi = \frac{Ni}{N}\ 100\%}$$

Pi: The percentage of the test items categorised according to the cognitive level (i: C1, C2, C3, C4, C5, C6)

Ni: Total test items categorised according the cognitive level

N: Total test items

Discussion

The findings of this study indicated the presence of LOTS and HOTS in the test items from the summative assessment at SMP Amore Prime School. In addition, such indication implies the evident endeavour to adhere to the demand of Merdeka curriculum implementation and the data collected revealed a significant distribution of LOTS and HOTS in the test items as illustrated from the table below:

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Table 2. The LOTS and HOTS Distribution

	Cognitive Level	Test Items	Amount of Test Items	
LOTS	Remembering (C1)	1,2,3,4,5,6,7,8,9,10,11, 12,13,14,15, 26,27,28,29,30	20	36
	Understanding (C2)	16,17,18,19,20,21,22,23,24,25	10	
	Applying (C3)	40, 41, 42, 43,44,45	6	
HOTS	Analyzing (C4)	31,32,33,34,35,36,37,38,39	9	15
	Evaluating (C5)	46,47,48,49,50	5	
	Creating (C6)		1	
Total			**51**	

The data results, obtained through the 51 test items, revealed an extended distribution of the cognitive levels as the items were designed to accommodate LOTS and HOTS. In terms of LOTS, Remembering has a total of 20 test items, Understanding has 10 items and Applying has 6 items. On the other hand, in terms of HOTS, Analysing has 9 items, Evaluating has 5 items and Creating has 1 item of essay question. However, the aforementioned data revealed that despite an extended distribution of LOTS and HOTS in the summative test items of SMP Amore Prime School, the summative test items were designed with more emphasis on the LOTS compared to HOTS. There is an imbalance frequency and percentage of LOTS and HOTS distribution in the test items as described in the following table:

Table 3. The LOTS and HOTS Frequency and Percentage

No	Thinking Process	Frequency	Percentage
1	LOTS	36	70.6 %
2	HOTS	15	29.4 %
Total		51	100 %

The findings provided by the data not only revealed the discrepancy of the distribution of LOTS and HOTS in the assessment items of SMP Amore School, but also confirmed the findings of the previous research asserting that the test items given to the Indonesian

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students are mostly LOTS-based (Rampean et al., 2022; Widiastuti and Mbato, 2025; Waliyuddin and Sulisworo 2022; Aziz et al., (2024). Consequently, even though the data indicated that the summative test items of SMP Amore School were designed to accommodate all the cognitive aspects of LOTS and HOTS, aiming to accommodate the demand of Merdeka curriculum, the percentage of the HOTS-based test items were significantly lower than the percentage of LOTS-based test items.

The findings of this study provided substantial insights in relation to the actual implementation of Merdeka curriculum in the English classroom. The findings obtained from the summative assessment test conducted at SMP Amore Prime school attested to such efforts to adhere to Merdeka curriculum implementation by accommodating both LOTS and HOTS in the summative test items. However, the overemphasis on LOTS (70.6%) over HOTS (29.6%) reveals that the ideal implementation of Merdeka curriculum is not thoroughly realised. A proper implementation of Merdeka curriculum emphasises the HOTS cognitive levels which encourages critical thinking, creativity and independent learning. Consequently, a summative test which adheres to the demands of Merdeka curriculum implementation must strive to ensure a balance emphasis on not only the foundational knowledge but also the practical application of such knowledge which promotes critical thinking, creativity and independent learning. Hence, the evident prevalence of LOTS-based test items in the summative test of SMP Amore Prime school implies that the ambition of a transformative education promoted by Merdeka curriculum is still hindered by frequent traditional summative assessment practices. However, it does not necessarily imply the absence of the importance of Merdeka curriculum implementation. In fact, the 29.6% proportion of HOTS elements suggests a considerable awareness of the teacher as the assessment designer in terms of the demands of Merdeka curriculum even though its total realisation is not fully integrated into assessment design.

The inconsistency between the ideal implementation of Merdeka curriculum and its actual integration in the classroom particularly in the assessment is prevalent. The challenge

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and tendency of the assessment designers of summative test at SMP Amore Prime school to rely on rote-learning assessment favouring the cognitive level of remembering and understanding is consistent with findings reported by Rampean et al., (2022) and Waliyuddin and Sulisworo (2022).

The aforementioned research discovered the common challenges faced by the teachers as assessment designers concerning their lack of capacity development training related to HOTS-based test which aims to help them limit their reliance on the rote-learning assessment. The situation which occurred in the implementation of summative assessment at SMP at SMP Amore Prime school resonates with the common cases faced in the field of Indonesian language assessment as reported by Widiastuti and Mbato (2025) and Aziz et al., (2024) confirming that the challenge to optimally integrate the implementation of Merdeka curriculum in the language assessment is a broader national issue.

It is also worth noting that there is a slight increase of the integration of HOTS-based test items in the assessment conducted at SMP Amore Prime school in comparison to other previous research. Such slight difference is a positive indicator which should not be underestimated as it implies that even though the proportion is limited, the integration of Merdeka curriculum is gradually shaping the language assessment development. Hence, even though the assessment practices administered at SMP Amore Prime school are gradually aligned with the implementation of Merdeka curriculum, the actual implementation has not fully obtained the transformative potential of Merdeka curriculum and therefore, more resilient efforts are expected to ensure that the future assessment development can accommodate the ideals of Merdeka curriculum by integrating more proportion of HOTS-based test items.

This study focused its investigation on the distribution of Lower Order Thinking Skills (LOTS) and Higher Order Thinking Skills in the summative assessment within the framework of Merdeka curriculum at SMP Amore Prime school. The results indicated that the summative test items were designed to cover the cognitive levels of both LOTS and

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HOTS. The extensive distribution of LOTS and HOTS in the assessment test items implies the awareness of the test designers concerning the demands of Merdeka curriculum implementation. However, the findings revealed uneven proportion of LOTS (70.6%) and HOTS (29.4%) test items in the summative assessment conducted at SMP Amore Prime school. This imbalance proportion suggests an evident discrepancy between the ideals of Merdeka curriculum and its actual application in the classroom, which is an existing challenge in most Indonesian classrooms. The persistent tendency towards designing LOTS-based test items at SMP Amore Prime school implies that the traditional assessment practice focus on rote-learning objectives is still common as opposed to the HOTS-based test items focusing on critical thinking, creativity and independent learning. However, the presence of HOTS elements in the summative test indicates a positive sign towards a more extensive integration of Merdeka curriculum model at SMP Amore Prime school.

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