

ANALYZING COGNITIVE LEVELS AND CONSTRUCTIVE ALIGNMENT IN A SEVENTH-GRADE ENGLISH TEACHING MODULE

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Abstract

This study investigated the cognitive levels and constructive alignment reflected in a seventh-grade English teaching module at SMPN 24 Tangerang. The study aimed to classify the cognitive levels of learning objectives, learning activities, and assessment tasks based on Bloom's Revised Taxonomy and to examine the alignment among these instructional components using Biggs and Tang's Constructive Alignment Theory. A qualitative document analysis was employed, supported by classroom observations and teacher interviews to triangulate data. The data were obtained from Chapter 5 (Units 1–3) of the English teaching module adapted from English for Nusantara. The findings revealed that most instructional components were categorized at the understanding (C2) and applying (C3) levels, indicating the predominance of Lower Order Thinking Skills (LOTS). Nevertheless, one assessment task reached the evaluating level (C5) and two tasks reached the creating level (C6), showing limited integration of Higher Order Thinking Skills (HOTS). The study also found that the instructional components were generally aligned, although several assessment tasks required higher-order cognitive processes than those specified in the learning objectives.

Keywords: Bloom's Revised Taxonomy; cognitive levels; constructive alignment; English teaching module; HOTS and LOTS.

INTRODUCTION

The rapid development of education in the twenty-first century has transformed curriculum design and instructional planning, emphasizing not only students' mastery of subject knowledge but also the development of higher-order thinking skills. Learners are expected to demonstrate critical thinking, creativity, analysis, problem-solving, and decision-making skills to respond effectively to

increasingly complex educational and real-world challenges (Drake & Reid, 2018). These expectations are reflected in Indonesia's implementation of the Merdeka Curriculum, which promotes student-centered learning through the use of teaching modules as instructional guides. Teaching modules generally consist of three essential instructional components, namely learning objectives, learning activities, and assessment tasks (Kemendikbud, n.d.). As the primary framework for planning instruction, these components should be systematically designed to support meaningful learning. Learning objectives determine the intended learning outcomes, learning activities facilitate students in achieving those outcomes, and assessment tasks evaluate the extent to which the objectives have been accomplished. Therefore, instructional planning requires careful consideration of cognitive levels to ensure that all instructional components consistently support the expected learning outcomes.

Within English language teaching, effective instructional planning involves not only identifying appropriate cognitive demands but also maintaining consistency among instructional components. Bloom's Revised Taxonomy developed by Anderson and Krathwohl has been widely adopted as a framework for classifying cognitive processes into six levels: remembering (C1), understanding (C2), applying (C3), analyzing (C4), evaluating (C5), and creating (C6). These cognitive processes are commonly categorized into Lower-Order Thinking Skills (LOTS), comprising remembering, understanding, and applying, and Higher-Order Thinking Skills (HOTS), including analyzing, evaluating, and creating (Anderson & Krathwohl, 2001). Bloom's Revised Taxonomy enables educators to identify the cognitive complexity of learning objectives, classroom activities, and assessment tasks while ensuring that instructional planning promotes students' cognitive development (Krathwohl, 2002). However, identifying cognitive levels alone is insufficient. Biggs and Tang's Constructive Alignment Theory emphasizes that learning objectives, learning activities, and assessment tasks should operate at compatible cognitive levels so that students are provided with appropriate learning experiences to achieve the intended outcomes (Biggs, 1996). When instructional components are developed at inconsistent cognitive levels, such as higher-order learning objectives being accompanied by lower-order learning activities or assessments, students may encounter difficulties in achieving the expected learning outcomes (Ali, 2018).

Despite the emphasis on Higher-Order Thinking Skills and instructional alignment within the Merdeka Curriculum, previous studies indicate that their implementation in English language teaching remains inconsistent. (Karimaliana et al., 2024) reported that many teachers still require support in designing HOTS-oriented teaching modules aligned with curriculum expectations. Likewise, (Hemas et al., 2021) found that HOTS elements in lesson plans frequently appeared only as indicators rather than being consistently reflected throughout instructional planning. Similar findings were reported by (Islamiati, 2024), whose analysis of an English textbook

published by Erlangga revealed that 90.7% of assessment questions were categorized as LOTS, while only 9.3% represented HOTS and none reached the creating (C6) level. These findings suggest that instructional documents continue to emphasize lower cognitive processes despite curriculum expectations encouraging students to engage in more complex thinking. Consequently, similar issues may also occur in teaching modules, considering that they function as teachers' primary instructional planning documents.

Beyond cognitive-level classification, instructional quality is also influenced by the consistency among learning objectives, learning activities, and assessment tasks. Previous studies have reported that assessment practices often fail to reflect the cognitive demands stated in learning objectives, resulting in limited opportunities for students to demonstrate higher-order thinking skills (Abate & Mishore, 2024). Similarly, (Hadiyanti et al., 2023) found inconsistencies in the alignment among learning objectives, learning activities, and assessments within English language teaching, indicating that instructional components frequently operate at different cognitive levels. Although previous research has contributed valuable insights into cognitive levels and instructional alignment, most studies have concentrated on textbooks, lesson plans, or assessment items. Comparatively little attention has been given to teacher-developed English teaching modules, particularly within the implementation of the Merdeka Curriculum. Furthermore, limited studies have simultaneously examined both cognitive levels and constructive alignment across learning objectives, learning activities, and assessment tasks within a single instructional document. This gap highlights the need for further investigation into the extent to which teaching modules facilitate coherent instructional planning and cognitive development.

To address this gap, this study investigates a seventh-grade English teaching module used at SMPN 24 Tangerang by analyzing the cognitive levels reflected in learning objectives, learning activities, and assessment tasks based on Bloom's Revised Taxonomy, as well as examining the constructive alignment among these instructional components using Biggs and Tang's Constructive Alignment Theory. The teaching module was selected because it was actively implemented during the research period, allowing document analysis to be supported through classroom observation and teacher interviews. Specifically, this study aims to (1) analyze the cognitive levels represented in learning objectives, learning activities, and assessment tasks, and (2) examine the constructive alignment among these instructional components. The findings are expected to contribute to the literature on English language teaching by providing empirical evidence regarding cognitive-level integration and instructional alignment within teaching modules, while also offering practical insights for improving instructional planning in the implementation of the Merdeka Curriculum.

RESEARCH METHOD

This study employed a descriptive qualitative approach using document analysis to investigate the cognitive levels and constructive alignment reflected in an English teaching module. A qualitative approach was selected because the study aimed to analyze and interpret instructional documents rather than measure variables or test hypotheses quantitatively. Document analysis served as the primary research method since the main data source consisted of written instructional documents. According to (Bowen, 2009), document analysis is a systematic procedure for reviewing and evaluating documents to obtain meaningful information. In this study, the analysis focused on learning objectives, learning activities, and assessment tasks contained in a seventh-grade English teaching module. Bloom's Revised Taxonomy (Anderson & Krathwohl, 2001) was employed to classify the cognitive levels of the instructional components into Lower-Order Thinking Skills (LOTS) and Higher-Order Thinking Skills (HOTS), while Constructive Alignment Theory proposed by Biggs and Tang was used to examine the alignment among learning objectives, learning activities, and assessment tasks. Consistent with qualitative inquiry, the findings were presented descriptively to explain cognitive-level patterns and instructional alignment.

Data were collected through document analysis, classroom observation, and teacher interviews using methodological triangulation. Document analysis functioned as the primary data collection technique, while classroom observation and interviews were employed to validate and enrich the findings obtained from the document analysis. The observation focused on the implementation of learning objectives, learning activities, assessment tasks, and their overall alignment during classroom instruction. Meanwhile, the semi-structured interview explored the teacher's understanding of cognitive levels, considerations in developing instructional components, and the implementation of the teaching module. These complementary techniques enhanced the credibility of the findings by providing evidence from multiple sources.

The collected data were analyzed through four stages. First, the teaching module was organized and divided into three instructional components: learning objectives, learning activities, and assessment tasks. Second, each component was identified and classified according to Bloom's Revised Taxonomy by considering not only the operational verbs but also the cognitive demands, task complexity, and learning context. The cognitive levels were then categorized into LOTS (C1–C3) and HOTS (C4–C6). Third, constructive alignment was examined by comparing the cognitive levels of learning objectives, learning activities, and assessment tasks within each unit to determine whether the instructional components were aligned or misaligned. Finally, the findings were interpreted descriptively and validated through classroom observation and teacher interviews using methodological triangulation to

enhance the credibility and trustworthiness of the analysis (Creswell & Poth, 2016) (Noble & Smith, 2015).

RESULT AND DISCUSSION

Findings

1. Cognitive levels analysis findings

The findings were obtained through document analysis supported by classroom observation and teacher interviews. The analysis focused on Chapter 5 (Units 1–3) of the seventh-grade English teaching module. Instead of presenting detailed classification tables for every instructional component, the journal version summarizes the cognitive-level patterns across the three units.

Table 1. Cognitive levels analysis

Unit	Learning Objectives	Learning Activities	Assessment Tasks	Main Finding
Unit 1	C3 (LOTS)	C2–C3 (LOTS)	C3 (LOTS); C6 (HOTS)	Predominantly LOTS with one creating task.
Unit 2	C2–C3 (LOTS)	C2–C3 (LOTS)	C2 (LOTS); C5 (HOTS)	Mostly LOTS with one evaluating task.
Unit 3	C2 (LOTS)	C2–C3 (LOTS)	C6 (HOTS)	LOTS-oriented learning with creating assessments.

Source: SMPN 24 Tangerang English teaching module for 7th grade

Across the three units, learning objectives and learning activities were predominantly classified at the understanding (C2) and applying (C3) levels, indicating the predominance of Lower-Order Thinking Skills (LOTS). Assessment tasks, however, included evaluating (C5) and creating (C6), demonstrating limited integration of Higher-Order Thinking Skills (HOTS).

Document analysis showed that Unit 1 emphasized asking for and giving directions through understanding and applying activities, while the enrichment task requiring students to design and present a school map reached the creating level. Unit 2 mainly focused on comprehension and application of extracurricular activities, with one enrichment task requiring students to evaluate and justify their preferred activity. Unit 3 similarly emphasized understanding and application before students completed descriptive writing and poster projects categorized at the creating level.

Observation findings supported these results. Classroom implementation was dominated by picture observation, listening activities, reading short texts, worksheet completion, and dialogue practice, reflecting understanding and applying processes. Higher-order thinking activities appeared mainly during project work conducted at the end of instruction.

Interview findings further confirmed that the teacher intentionally considered cognitive levels when designing objectives, activities, and assessments. According to the teacher, cognitive demands were adjusted to curriculum requirements, students' characteristics, learning materials, and classroom conditions.

Overall, the module prioritized foundational language competence while gradually introducing higher-order thinking through selected project and enrichment assessments.

2. Constructive alignment analysis findings

Table 2. Constructive alignment analysis

Unit	Alignment	Remarks
1	Generally aligned	Enrichment task reached C6.
2	Generally aligned	Enrichment task reached C5.
3	Generally aligned	Assessment tasks reached C6.

The analysis indicated that learning objectives, learning activities, and assessment tasks were generally aligned across all three units. Learning activities prepared students to achieve the intended objectives before completing assessments. Although several assessment tasks reached higher cognitive levels than the corresponding objectives, they remained relevant because they functioned as enrichment and project activities extending students' learning.

Observation confirmed that teachers implemented the sequence of activities according to the module, while interview results showed that alignment was deliberately maintained through operational verbs, formative assessment, and authentic assessment practices.

Discussion

1. Cognitive levels in the English teaching module

Based on the findings, the learning objectives, learning activities, and assessment tasks in Chapter 5 were predominantly classified at the understanding (C2) and applying (C3) levels of Bloom's Revised Taxonomy. These findings indicate that the English teaching module primarily emphasized Lower-Order Thinking Skills (LOTS),

with instructional activities focusing on helping students understand information, practice language expressions, and apply English in meaningful communicative contexts. Nevertheless, several assessment tasks were categorized at the evaluating (C5) and creating (C6) levels, indicating that opportunities for Higher-Order Thinking Skills (HOTS) were incorporated through selected enrichment and project-based assessments.

The predominance of LOTS identified in this study is consistent with the findings of (Tunnadia et al., 2025), who analyzed English teachers' lesson plans and reported that instructional components were largely dominated by understanding and applying, whereas HOTS elements represented only a small proportion of the analyzed lesson plans. Specifically, understanding accounted for **31.97%** and applying for **24.59%**, while evaluating (**8.20%**) and creating (**7.38%**) appeared far less frequently. This previous study further argued that teachers tended to prioritize knowledge acquisition and procedural language skills before introducing more cognitively demanding activities. This pattern closely resembles the present study, in which the teaching module emphasized foundational language competence before integrating evaluating and creating tasks within assessment activities.

A similar pattern was reported by (Indah Nabila, 2024), who found that English lesson plans in EFL contexts continued to prioritize understanding and applying despite curriculum expectations encouraging higher-order thinking. Likewise, (Hemas et al., 2021) concluded that although HOTS-related operational verbs appeared in several lesson-plan components, their implementation remained limited and inconsistent across instructional planning. Together, these studies suggest that English instructional documents generally continue to emphasize lower-order cognitive processes while integrating HOTS only in selected instructional components.

However, the findings of the present study also demonstrate an important distinction. Unlike previous studies that mainly identified the presence or absence of HOTS in lesson plans or instructional materials, this study found that HOTS was integrated specifically within enrichment and project-based assessment tasks after students had completed learning activities at the LOTS level. This progression indicates that the teaching module did not neglect higher-order thinking but rather introduced it gradually after students had developed sufficient conceptual understanding and language competence. Such sequencing provides students with opportunities to apply, evaluate, and create using the knowledge acquired during earlier stages of instruction.

This finding is consistent with (Anderson & Krathwohl, 2001), which conceptualizes cognitive development as progressing from lower-order processes toward more complex thinking. Students are generally expected to develop understanding and application before engaging in evaluating or creating tasks because higher-order thinking requires adequate conceptual knowledge and procedural

competence. Therefore, the predominance of LOTS in learning objectives and classroom activities should not necessarily be interpreted as a weakness in instructional design but rather as an appropriate pedagogical sequence for supporting students' cognitive development.

The document-analysis findings were further supported by classroom observation. During the observed lessons, students primarily engaged in listening activities, reading short texts, identifying information, completing worksheets, and practicing dialogues before undertaking project-based assessments. These activities reflected the understanding and applying levels identified in the document analysis. Meanwhile, higher-order thinking activities appeared mainly during enrichment tasks that required students to create products or express judgments after completing guided practice.

The interview findings also strengthened these results. The English teacher explained that cognitive levels were deliberately considered when formulating learning objectives, selecting learning activities, and designing assessment tasks. According to the teacher, instructional decisions were adjusted to students' characteristics, classroom conditions, curriculum expectations, and the competencies targeted in each unit. This explanation supports the gradual integration of HOTS observed in the teaching module, indicating that higher-order thinking activities were intentionally introduced after students had achieved the expected foundational competencies.

Overall, the findings suggest that the teaching module adopts a gradual cognitive progression, in which LOTS serves as the foundation for developing students' language competence before selected HOTS-oriented assessment tasks are introduced. Compared with previous studies, the present research provides a more comprehensive analysis because it examines cognitive-level distribution across learning objectives, learning activities, and assessment tasks simultaneously, while validating the findings through classroom observation and teacher interviews. This integrated approach offers a broader understanding of how cognitive levels are implemented in English teaching modules rather than examining only one instructional component.

2. Constructive alignment in the English teaching module

The findings revealed that the learning objectives, learning activities, and assessment tasks in Chapter 5 were generally aligned. Across the three units, learning activities consistently supported the intended learning objectives, while assessment tasks measured the competencies that had been developed throughout the learning process. Although several assessment tasks reached higher cognitive levels than the corresponding learning objectives and learning activities, these tasks remained

relevant because they were designed as enrichment and project-based activities completed after students had acquired the required knowledge and skills.

This finding is in line with (Hadiyanti et al., 2023), who emphasized that effective learning occurs when learning objectives, instructional activities, and assessment tasks are coherently connected. Similarly, (Abate & Mishore, 2024) argued that instructional alignment ensures assessment tasks accurately reflect the competencies intended in the learning objectives. In the present study, assessment tasks requiring evaluating (C5) and creating (C6) did not indicate instructional inconsistency but rather provided students with opportunities to extend their learning beyond the minimum expected outcomes.

These findings also support (John Biggs Catherine Tang, n.d.) Constructive Alignment Theory, which highlights the importance of designing learning objectives, teaching and learning activities, and assessment tasks as an integrated instructional system. From this perspective, alignment should not be judged solely by whether all instructional components share the same cognitive level, but by whether each component contributes to achieving the intended learning outcomes. Therefore, the inclusion of higher-order assessment tasks in the teaching module can still be considered aligned because they logically followed the preceding learning activities and remained relevant to the instructional objectives.

The document analysis was further supported by classroom observation and teacher interviews. Observation findings showed that the teacher implemented learning activities according to the sequence presented in the teaching module before assigning assessment tasks. Likewise, the interview revealed that learning objectives, activities, and assessments were developed by considering curriculum requirements, students' characteristics, classroom conditions, and appropriate operational verbs. These findings indicate that constructive alignment was intentionally maintained during both instructional planning and classroom implementation.

Overall, the findings suggest that the teaching module successfully demonstrates the principles of constructive alignment by maintaining coherence among learning objectives, learning activities, and assessment tasks. This study extends previous research by examining the alignment of all three instructional components within a teaching module and validating the findings through document analysis, classroom observation, and teacher interviews.

CONCLUSION

This study investigated the cognitive levels and constructive alignment reflected in a seventh-grade English teaching module used at SMPN 24 Tangerang. The findings revealed that the instructional components predominantly reflected Lower-Order Thinking Skills (LOTS), particularly at the understanding (C2) and applying (C3) levels of Bloom's Revised Taxonomy. Learning objectives, learning activities, and most

assessment tasks primarily emphasized students' comprehension and application of English in meaningful contexts. Nevertheless, several assessment tasks reached the evaluating (C5) and creating (C6) levels, indicating that opportunities for Higher-Order Thinking Skills (HOTS) were incorporated through selected enrichment and project-based activities.

The study also found that the teaching module generally demonstrated constructive alignment. Learning objectives, learning activities, and assessment tasks were coherently connected and consistently supported the intended learning outcomes. Although several assessment tasks required higher cognitive processes than those explicitly stated in the learning objectives, they remained relevant to the instructional sequence and functioned as an extension of students' learning rather than a misalignment. These findings were further supported by classroom observation and teacher interviews, which confirmed that cognitive levels and instructional alignment were intentionally considered during the planning and implementation of instruction. Overall, the findings suggest that effective instructional design is determined not only by the inclusion of HOTS-oriented tasks but also by the consistency among learning objectives, learning activities, and assessment tasks. Therefore, English teachers are encouraged to maintain constructive alignment while gradually integrating more higher-order thinking activities that are appropriate to students' learning readiness and classroom contexts. Future studies may expand the scope of analysis by examining teaching modules from different grade levels, schools, or subject areas to provide a broader understanding of cognitive-level integration and constructive alignment in instructional design.

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