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The Integration of Higher Order Thinking Skills by Certified English Teachers in Senior High School

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Abstract. Examining the challenges in implementing Higher-Order Thinking Skills (HOTS) among certified English teachers offers valuable insights into teachers' professional competences and the quality of the instructional process. This process involves the development of lesson and assessment plans, in which HOTS is a key component aligned with the demands of 21st-century education. This study aimed to explore the teaching practices and challenges encountered by three certified English teachers at Babul Maghfirah High School in Aceh in their efforts to integrate HOTS into classroom instruction. The research specifically focused on evaluating teaching activities based on established HOTS-based learning criteria and identifying the obstacles that hindered effective implementation. Data were collected using checklists, observation guides, and semi-structured interviews. The participants in this study were three certified English teachers, and the primary objects of analysis were their lesson plans, assessments, and teaching practices. This study adopted a qualitative descriptive approach within a case study framework. Data collection was conducted through classroom observations and in-depth interviews. The findings revealed that the instructional practices did not fully align with the principles of HOTS-based learning. Teacher-centered approaches remained dominant, the integration of 4C skills (critical thinking, communication, collaboration, and creativity) was incomplete, and conventional teaching methods were still prevalent. Furthermore, the study identified several contributing factors to these shortcomings, including limited teacher understanding of HOTS, insufficient school facilities, and students' difficulties in comprehending lesson content. Therefore, the incomplete implementation of HOTS by certified English teachers reflected a broader issue of unmet criteria in HOTS-based instructional design.

Keywords: **HOTS, Certified English Teachers, Learning Process**

Introduction

The advancement of science and technology in the 21st century presents an inevitable reality that both educators and students must adapt to. One of the key responses to this challenge is the implementation of Higher-Order Thinking Skills (HOTS)-based learning, aimed at enhancing student quality, particularly in the Indonesian educational context. As emphasized by Apriani et al. (2022) and Ginting & Kuswandono (2020), HOTS-based instruction constitutes a central feature of 21st-century education, designed to foster students' abilities in critical thinking, problem-solving, and decision-making—skills that are vital for navigating the demands of the Industrial Revolution 4.0.

In alignment with these global educational shifts, the Indonesian Ministry of Education and Culture has, since 2013, sought to improve the quality of education and graduates by embedding HOTS within the framework of Curriculum 2013. The curriculum reform aims to strengthen students' character formation in response to global challenges, with an emphasis

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on cultivating analytical reasoning, questioning ability, communication, and critical thinking (Feronica et al., 2021). Curriculum 2013 mandates that students acquire competencies outlined by the Indonesian Partnership for 21st Century Skills Standards (IP-21CSS), which highlight three core domains: the 4Cs (creativity and innovation, critical thinking and problem-solving, communication, and collaboration), information and communication technologies (ICT literacy), and life and career skills, including character development and spiritual values.

Correspondingly, educational quality—both in terms of learning processes and student outcomes—relies heavily on teachers' instructional competence. Susuoroka et al. (2023) argue that the effectiveness of teaching is a critical determinant of student achievement. In response, the Ministry initiated a teacher certification program to enhance educators' professionalism, particularly in mastering HOTS-oriented instruction. Research by Purnama & Nurdianingsih (2019) confirms that HOTS integration improves students' speaking abilities and stimulates complex, context-driven thinking that promotes critical, logical, reflective, creative, and metacognitive engagement (Al Yakin et al., 2024). Similarly, Sitorus et al. (2021) demonstrate that incorporating HOTS into reading instruction challenges students to engage in higher-level cognitive processes.

However, the practical implementation of HOTS remains inconsistent. Saraswati & Wicaksono (2023) observed that certified English teachers often exhibit minimal engagement with HOTS strategies, hindered by misconceptions and low student motivation. Djami & Kuswandono (2020) found that only a few teachers at a senior high school in Salatiga possessed a comprehensive understanding of HOTS, with many equating it to the scientific approach. Moreover, some educators perceived HOTS as unsuitable for their students, favoring repetitive drilling methods instead.

Zulfikar (2021) further explored this issue through a case study involving certified EFL teachers in Aceh, Indonesia. His findings revealed that while one teacher demonstrated strong pedagogical competence, the others, despite adequate lesson planning, adhered to teacher-centered methodologies, made limited use of instructional media, and employed narrow learning resources. Tyas et al. (2019) echoed similar concerns, noting that many EFL teachers confused HOTS with general problem-solving skills and assumed that HOTS-based questions are inherently difficult. Additional challenges include limited access to learning resources, insufficient teacher guidance, students' cognitive readiness, and the complexity of learning materials—all of which obstruct effective HOTS implementation.

In light of these issues, the present researchers conducted a preliminary investigation at Babul Maghfirah Senior High School to assess real-time instructional practices. The findings revealed several concerns: teaching remained teacher-centered, rendering students passive, and the average student score on the final exam was 68—below the minimum competency threshold. Furthermore, students' performance on the English National Examination was also below the required passing grade when not combined with school-based assessments.

While previous studies have separately examined either HOTS integration or certified teachers' instructional performance, this study seeks to bridge both by investigating how certified English teachers implement HOTS-based learning in the context of the Fourth Industrial Revolution. Specifically, the study explores the extent to which instruction incorporates analytical, evaluative, and creative thinking, as well as 21st-century skill sets (4Cs). Such investigation is crucial for evaluating whether classroom activities genuinely support the development of 21st-century competencies—something certified educators are expected to facilitate as part of their professional mandate.

Furthermore, this research aims to highlight and examine the apparent shortcomings in HOTS implementation by certified teachers—gaps that require urgent attention from policymakers. Since HOTS is at the core of Curriculum 2013 and certified teachers are expected to demonstrate pedagogical, professional, personal, and social competencies, failure to effectively incorporate HOTS into learning processes may reflect a broader failure in curriculum implementation.

Theoretical Framework

HOTS in Bloom Taxonomy

Higher-order thinking skills (HOTS) use the mind's potential to cope with new challenges. Kwangmuang et al (2021) HOTS involves a cognitive process where students rework existing information and concepts in specific ways to develop deeper insights and new interpretations. Sani (2019, pp. 1–2) defines higher-order thinking skills (HOTS) as the advanced cognitive processes employed to acquire new knowledge or reinterpret existing information, manipulate data, and address real-life problems. In essence, HOTS involves a mode of thinking that encourages learners to process information in ways that yield new insights and applications. This is achieved through integrative cognitive activities such as analysis, synthesis, association, and inference, ultimately fostering the development of innovative and constructive ideas.

Bloom's Revised Taxonomy categorizes learning into three domains: cognitive, affective, and psychomotor. Within the cognitive domain, Anderson and Krathwohl identify six levels of thinking. The foundational levels—remembering, understanding, and applying—are considered lower-order thinking. In contrast, the higher-order cognitive processes include analyzing, evaluating, and creating, with the latter representing the highest tier of cognitive engagement. According to Ocy (2021), each level of higher-order cognition is characterized by specific mental operations. Analyzing (C4) entails deconstructing content into key components and understanding the relationships among them, using strategies such as comparing, contrasting, experimenting, and questioning. Evaluating (C5) involves making judgments based on criteria or standards, including activities such as justifying, defending, and appraising. Creating (C6) refers to the integration of ideas or elements into coherent, original constructs through activities like designing, formulating, or composing.

In the psychomotor domain, HOTS is manifested through skills that engage physical movement, aligning with 21st-century competencies often referred to as the 4Cs: creativity and innovation, critical thinking and problem-solving, communication, and collaboration. According to Demircioglu, Karakus, and Ucar (2022), critical thinking and problem-solving involve the capacity to identify, analyze, interpret, and assess evidence, arguments, claims, and data. These cognitive tasks encourage students to critically reflect on information, thereby enabling informed decision-making across various contexts. Communication pertains to the ability to express ideas clearly and effectively, whether orally, in writing, or through digital media. Lastly, collaboration emphasizes cooperative problem-solving and the ability to work constructively with others to achieve shared goals.

Higher-Order Thinking Skills-based Learning

Learning is fundamentally a process through which individuals acquire knowledge, refine skills, and develop attitudes. This process leads to personal transformation, encompassing not only intellectual growth but also changes in behavior and personality relevant to everyday life. According to Munna and Kalam (2021), learning can be conceptualized as a sustained transformation in students that is facilitated by the teacher through various instructional strategies—such as skill development, attitude formation, or fostering an understanding of scientific concepts—which collectively shape the learning environment.

In the context of English language instruction, it is essential for teachers to provide students with explicit and structured guidance. As Feronica et al. (2021) suggest, this includes modeling accurate pronunciation and systematically enhancing students' language proficiency. Furthermore, English teachers are expected to be proactive and innovative, continuously adapting their teaching strategies to foster language acquisition. In addition to pedagogical effectiveness, teachers are also viewed as role models and, as such, must embody the four core competencies of professional educators: pedagogical, professional, personal, and social competence.

Learning that is grounded in Higher-Order Thinking Skills (HOTS) exhibits several key characteristics. In such a learning environment, students are encouraged to engage in active, independent thinking while the teacher serves primarily as a facilitator. The instructional

approach is designed to help learners identify and formulate problems, generate appropriate solutions, engage in divergent thinking, develop original ideas, access relevant information, and solve problems through critical, analytical, and evaluative reasoning, ultimately guiding them toward sound decision-making. However, despite its theoretical appeal, implementing HOTS in practice poses significant challenges. Mursyid and Kurniawati (2019) highlight several obstacles, including limitations in teachers' professional competence, lack of teaching experience, monotonous instructional practices, and an overemphasis on content transmission rather than skill development.

To analyze how certified teachers implement HOTS-based learning, the researchers in this study developed an observation instrument derived from the characteristics of HOTS learning as described by Sani (2019), which align with the instructional phases of Curriculum 2013. The observation framework was structured into three phases: pre-activity, whilst-activity, and post-activity. Each phase incorporated indicators aligned with HOTS principles, including active engagement in thinking, problem formulation, tackling complex issues, divergent thinking and idea development, information seeking, critical and creative problem-solving, as well as analytical, evaluative, and decision-making skills. To further identify the challenges faced by teachers in applying HOTS, the study employed interview protocols informed by Tyas et al. (2019), focusing specifically on the obstacles encountered during HOTS implementation.

Material and Method

This study employed a descriptive qualitative design using a case study approach to examine the implementation of higher-order thinking skills (HOTS) by certified English teachers at Babul Maghfirah High School in Banda Aceh, Indonesia. As described by Creswell and Poth (2023), qualitative research is a methodological approach aimed at exploring and understanding the meanings that individuals or groups ascribe to social or human problems. In this context, the case study aimed to investigate and interpret the phenomenon of how certified English teachers integrate HOTS into English instruction (Creswell, 2023). The case study design, characterized by descriptive analysis, enabled the researchers to present data in its natural form without manipulation, thereby providing an authentic account of HOTS implementation in the classroom.

The study involved three certified English teachers responsible for teaching students in grades ten, eleven, and twelve. Data collection methods included classroom observations and semi-structured interviews to capture both the instructional practices and the challenges associated with integrating HOTS into the learning process. The observations followed a participant observation model, in which the researchers directly observed teaching activities, guided by an instrument incorporating HOTS-based learning criteria adapted from Sani (2019). Prior to the observations, teachers were informed that their classroom activities would be recorded. Complementing the observational data, interviews were conducted to gather insights into the challenges teachers encountered when implementing HOTS, with the interviews recorded using mobile devices for accuracy.

Following data collection, the researchers analyzed the findings using the data analysis model proposed by Miles et al. (2014), which involves data condensation, data display, and the drawing and verification of conclusions. The observation instrument was structured around Sani's (2019) framework for HOTS-based learning, which includes pre-activity indicators, teaching approaches, instructional models and methods, application of the Scientific Approach, integration of 21st-century skills (4Cs), and cognitive, psychomotor, and affective assessment. Meanwhile, the interview protocol was adapted from Tyas et al. (2019), with a focus on lesson planning, instructional delivery, and assessment practices.

To analyze the observational data, the researchers first categorized each instrument component into the three main stages of the learning process. They then aggregated the observational data from all three teachers, calculated the frequency of HOTS-based practices using a simple percentage formula, and interpreted the findings by aligning them with relevant theoretical frameworks to derive more concrete conclusions. For the interview data, responses

were identified, coded, and organized into three thematic categories: teacher professionalism, availability of school facilities, and students' academic capabilities.

Results and Discussion

There are 38 criteria to analyze the HOTS-based learning conducted by three senior high school certified English teachers. The criteria in the observation guide were adapted from Sani (2019) As the point to identify the learning process. Based on the Curriculum 2013, the learning process is divided into three steps: pre-activity, whilst activity, and post-activity. To get data on HOTS integration, researchers combined the analysis results of three teachers as the representative data of the HOTS integration phenomenon.

Table 1.
Pre-activity Process

Criteria	Teacher's Initials		
	T1	T2	T3
The teacher conducts orientation, apperception, and motivation activities.	✓	✓	✓
The teachers' explanation of learning objectives and real-life connection	✓	✓	✓
The teachers' communication of competency achievement indicators	-	-	-

Table 1 consists of three criteria as the opening of the learning process. The result shows that all participants conducted activities such as greeting, praying, and checking students' attendance as the orientation activity, reviewing previous material, and brainstorming as an apperception activity. Teachers also motivate students both intellectually and spiritually. Based on the Curriculum 2013, teachers have conveyed learning objectives related to daily life and facts in the surrounding environment. However, it has not been identified that teachers deliver their students about the competency achievement indicators that should be achieved.

Table 2.
Whilst Activity Process

Criteria	Teacher's Initials		
	T1	T2	T3
The teacher uses the following approaches;			
Scientific approach	✓	✓	✓
Contextual approach	-	-	-
The teacher uses the following learning models;			
Discovery	-	✓	✓
Problem-based	-	-	-
Project-based	-	-	-
Inquiry-based	-	-	-
The teacher delivers contextual and appropriate materials based on target competency and HOTS criteria.	-	✓	-
The teacher uses the following learning methods;			
Discussion	✓	✓	✓
Lecturing	-	-	✓
Question-answer	✓	✓	✓
Assignment	✓	✓	-
Experimental	-	-	-
Demonstration	-	-	-

Simulation	-	-	-
The teacher conducts the activity based on the scientific learning step;			
Observing	✓	✓	✓
Questioning	✓	✓	✓
Collecting Data	-	-	-
Associating	✓	✓	-
Communicating	-	-	-
The teacher implements *Reinforcement of Character Education.*	✓	✓	✓
The teacher conducts a literacy activity.	-	-	-
The teacher creates activities to improve students' higher-order thinking skills;			
Creativity	-	✓	-
Critical thinking	-	-	-
Communication	-	-	-
Collaboration	✓	✓	✓
Problem-solving	-	-	-
Decision making	-	-	-
Argument giving	✓	✓	-

Table 2 reveals that all teachers used a scientific approach and adapted four learning models listed in the Curriculum 2013, including discovery, problem-based, project-based, and inquiry learning. However, it was indicated that only two teachers applied the learning models, while others implemented traditional learning models. In the process of delivering materials, there was a teacher who adjusted then conveyed the materials based on competency achievement indicators. During carried out whilst activity, teachers used several techniques to improve students' higher-order thinking skills, mainly using discussion, question-answer, and assignment techniques to achieve the learning goals. Conversely, the twelfth-grade teacher also used the lecture method.

Based on the scientific approach used by teachers, there were five steps to conduct the learning process. It has indicated that teachers have not fully implemented all scientific learning steps in the class, such as data collecting and communicating. On three last criteria, which represented the Curriculum 2013 and HOTS-based learning, such as the *Reinforcement of Character Education*, literacy activity, and higher-order thinking skills, revealed different results. In these components, all teachers taught character education to improve students' attitudes but did not guide the class to have literacy activities. In integrating the activity, which led to higher-order thinking skills, all teachers fully guided students to collaborate in a group, led them to the activity, improved their creativity, and issued several problems to direct them in giving their arguments.

Table 3.
Post-activity Process

Criteria	**Teacher's initials**		
	T1	**T2**	**T3**
The teacher gives feedback on students' works.	✓	✓	✓
The teacher and students conclude the learning process.	✓	✓	✓
The teacher conducts evaluation activities;			
Cognitive assessment	✓	✓	✓
Psychomotor assessment	-	✓	-
Affective assessment	-	-	-

The teacher holds remedial and enrichment activities.	-	-	-
The teacher gives homework related to the learning materials.	✓	-	-

Table 3 includes the post activities based on higher-order thinking skills criteria. The analysis result of the first criterion denotes that the teacher provided feedback on students' works and invited students to conclude the whole learning process. In conducting an assessment to measure students' ability, all teachers did a thorough cognitive assessment to measure students' knowledge achievement, but only eleventh-grade teachers conducted a psychomotor assessment to evaluate students' language skills. However, the affective assessment was not identified during the class observation, or teachers did not evaluate their students' attitudes. The last two criteria indicate that no teachers conducted remedial or enrichment as the follow-up activity; then, only one teacher gave their students homework to get them to repeat the learning materials at home.

Furthermore, researchers have interviewed to find the challenges certified English teachers face. The interview consisted of 7 questions conducted directly and recorded by mobile phone. Before conducting the interview, the teachers claimed that they had already designed the lesson plan based on HOTS criteria. Then, researchers give the teachers questions to verify that the learning steps are following the lesson plan.

Teacher 1 (T1) stated:

"Yes, I have implemented the instructional steps as outlined in my lesson plan."

Teachers 2 (T2) and 3 (T3) remarked:

"Yes, I have endeavored to adhere to the instructional steps in the lesson plan, although certain activities were not fully aligned due to contextual classroom conditions and situational constraints."

All three teachers confirmed that the learning process was conducted in accordance with the 2013 Curriculum (K-13) and incorporated elements of higher-order thinking skills (HOTS). However, they acknowledged encountering various challenges in implementing HOTS-based instruction, which stemmed from student-related factors, institutional limitations, and internal constraints of the teachers themselves. Regarding student-related challenges, when asked whether student responses during the learning process met their expectations, all teachers expressed that students had not fully engaged as anticipated. While some students demonstrated motivation, others showed limited interest and involvement, leading teachers to assess overall student responsibility at approximately 50%. Moreover, with respect to student participation, Teachers 1 and 3 provided differing perspectives.

Teacher 1 (T1) explained:

“Yes, students were actively engaged. Approximately 50% of them participated actively in classroom activities.”

Teacher 3 (T3) responded:

“Based on my teaching experience, most students tend to show minimal attention, although a few are actively engaged and demonstrate a willingness to learn.”

Another major challenge identified was the learning difficulties experienced by students. Each teacher highlighted distinct issues faced by their respective classes.

Teacher 1 (T1) observed:

"Students frequently express concerns regarding grammatical structures, which hinders their confidence in speaking English."

Teachers 2 (T2) and 3 (T3) noted:

"Students become easily disengaged or bored, which may be attributed to the limited media resources provided by the school. For example, the absence of LCD projectors restricts us to using only textbooks and chalkboards as instructional tools."

Another obstacle is students who interfere with the learning activities. This happened because the teachers were lacking in managing the classroom. Responses from T1 and T3 Several students in each class were reported to have disrupted their peers during learning activities; however, the teacher consistently provided verbal warnings and encouraged students to re-engage in a conducive learning environment. Conversely, Teacher 2 (T2) did not encounter such behavioral challenges, stating that students generally participated actively and maintained a positive and focused classroom atmosphere.

Another issue highlighted was the difficulty teachers faced in classroom management, particularly concerning time allocation. All three teachers—T1, T2, and T3—acknowledged ongoing challenges in managing instructional time effectively. As a result, certain planned activities, such as the presentation and discussion of students' work, were occasionally omitted due to time constraints. In addition, the researchers posed a reflective question regarding the teachers' perceptions of their own effectiveness in implementing learning activities. The following are their responses:

Teachers 1 (T1) and 2 (T2) stated:

"I believe I have delivered instruction effectively and efficiently; however, outcomes are heavily influenced by students' individual characteristics and behavior. When students follow directions and engage as expected, I consider the learning objectives to have been successfully achieved."

Teacher 3 (T3) responded:

"In my view, my current ability to teach effectively and efficiently remains insufficient."

Based on the interview findings with the three certified English teachers, it is evident that they have made efforts to implement instructional activities aligned with higher-order thinking skills (HOTS). Nevertheless, various obstacles—originating from student behavior, institutional limitations, and personal teaching competencies—have hindered the optimal realization of HOTS-based instruction. These factors contribute to the teachers' critical assessment that their instructional practices have not yet reached full effectiveness or efficiency.

Discussion

Classroom observations were conducted in three classes taught by certified English teachers. Prior to the observations, the researchers examined the teachers' lesson plans to evaluate the alignment between the planned instructional activities and their implementation during the learning process. Each teacher in the study instructed a different grade level and covered a distinct topic: Teacher 1 (T1) taught a Grade 10 class on the topic of *Congratulating and Complimenting* (KD 3.2 & 4.2), Teacher 2 (T2) instructed a Grade 11 class on *Formal Invitations* (KD 3.3 & 4.3), and Teacher 3 (T3) facilitated a Grade 12 class focusing on *Captions for Pictures, Photos, Tables, Graphs, and Charts* (KD 3.3 & 4.3).

According to Munna and Kalam (2021), learning is a sustained transformation in students, influenced by instructional strategies such as skill development, attitude change, or comprehension enhancement. Movva et al. (2022) categorize the learning process into three stages: pre-activity, whilst-activity, and post-activity. The learning processes observed in this study were designed to align with the characteristics of Higher-Order Thinking Skills (HOTS)-based instruction as outlined by Sani (2019), which include active and divergent thinking,

critical analysis, problem-solving, creative idea generation, decision-making, and the development of 21st-century competencies (4Cs: creativity, critical thinking, collaboration, and communication).

During the pre-activity phase, teachers prepared students both psychologically and physically for the lesson. Three primary activities were observed: orientation (greetings, prayer, and attendance), apperception (review of prior material and contextualization), and motivation (ice-breakers and encouragement). Consistent with the expectations of the 2013 Curriculum (K-13), teachers are required to communicate the learning objectives to students to help them understand the intended outcomes and the relevance of the material. As Ananda (2019) emphasized, learning objectives guide both teaching and student engagement. All participating teachers conveyed the learning objectives; however, they did not explicitly communicate the achievement indicators to students.

In the core instructional phase, where HOTS-oriented lesson plans and assessments were intended to be employed, a scientific approach was adopted in accordance with K-13's thematic learning model. Nonetheless, discrepancies emerged between planned and implemented instructional models. For example, although Teacher 2's lesson plan utilized a project-based learning approach, the actual instruction followed a discovery learning model. Similarly, Teacher 1 did not apply any of the K-13-recommended instructional models (e.g., discovery, inquiry, project-based, or problem-based learning), opting instead for the traditional grammar-translation method. Furthermore, T1's instruction did not correspond to the prescribed basic competencies or learning indicators, focusing primarily on definitions, structures, and linguistic features, rather than application-based instruction. This misalignment underscores Ananda's (2019) assertion that instructional content must be closely tied to learning objectives to ensure coherent educational outcomes.

Various instructional methods were observed across the three teachers. T1 and T2 employed discussion, question-and-answer, and assignment methods, while T3 utilized lectures in addition to these. While all teachers implemented components of the scientific approach (observing, questioning, associating), they demonstrated deficiencies in facilitating the data collection and communication phases—critical elements of the scientific method. As Pahruddin and Pratiwi (2019) explained, scientific learning involves guiding students through a structured inquiry process—planning, collecting, and analyzing data, followed by drawing conclusions—to achieve cognitive, affective, and psychomotor learning outcomes.

Despite some integration of the 4Cs competencies, the full implementation of HOTS-based teaching, particularly in fostering creativity, critical thinking, communication, and collaboration, was lacking. Nevertheless, in alignment with the character education focus of the 2013 Curriculum, all teachers incorporated reinforcement of character values (PPK) during the teaching process. Through this approach, students are expected to internalize and practice positive character traits in their daily lives.

The post-activity stage was generally implemented adequately. Teachers prompted students to reflect on and summarize the material, provided feedback, and discussed worksheets. However, only one teacher conducted psychomotor assessments to evaluate student skill performance. Notably, none of the teachers performed affective assessments to observe students' attitudes and behaviors, despite Setiawati et al. (2019) emphasizing that such assessments are essential for evaluating students' spiritual and social behavior both inside and outside the classroom. Additionally, remedial or enrichment activities for students below or above the minimum competency criteria (KKM) were not conducted, nor were students assigned homework. These shortcomings further reveal that while HOTS-based assessments were intended, their implementation was inconsistent and insufficient.

Djami and Kuswandono (2020) have argued that implementing HOTS is essential to enhance learning quality and graduate competencies, as prescribed by the 2013 Curriculum. The application of HOTS encourages students to engage in critical, innovative, and creative problem-solving. In the context of language education—specifically reading, writing, speaking, and listening—HOTS can enhance student motivation and learning outcomes. Classroom observations revealed that student engagement varied significantly depending on the

instructional method employed. In classes where HOTS was integrated, students were observed to participate actively through questioning, discussion, collaborative product development, and presentations. Conversely, in classes where traditional methods, such as grammar-translation, dominated, students exhibited lower engagement, limited to passive activities such as translating texts and listening to lectures. This teacher-centered approach limited students' opportunities to explore and develop their higher-order thinking abilities.

The positive relationship between HOTS-based instruction and student motivation, engagement, and learning outcomes is supported by several empirical studies. Purnama and Nurdianingsih (2019) found that HOTS instruction enhanced students' speaking abilities, especially in daily contexts, by fostering critical, logical, reflective, and creative thinking. Similarly, Sitorus et al. (2021) demonstrated that HOTS strategies improved students' reading comprehension by encouraging inquiry and collaborative discussion.

In conclusion, the integration of HOTS-based English instruction has significant implications for increasing student motivation and engagement through activities such as problem-solving, group discussions, and critical analysis. To effectively participate in these activities, students require well-developed analytical, evaluative, and creative thinking skills. However, the successful implementation of HOTS is often hindered by several challenges. According to Tyas et al. (2019), these include teachers' limited understanding of HOTS, inadequate learning resources, insufficient teaching experience, variability in student abilities, and the inherent complexity of instructional materials. This study categorizes the challenges into three main areas: teacher professionalism, institutional support, and student capacity. With regard to teacher professionalism, barriers included difficulties in delivering HOTS-based instruction, assessing student competence, and managing classroom dynamics and time. Institutional constraints involved the lack of facilities such as language laboratories, interactive learning media, and up-to-date textbooks. Finally, student-related challenges included large class sizes and varying levels of academic readiness, all of which impeded the full integration of HOTS into English language instruction.

Conclusion

Based on the data collected regarding the implementation of Higher-Order Thinking Skills (HOTS)-based instruction by certified English teachers at Babul Maghfirah Senior High School, the researchers concluded that the teachers had not fully met the established criteria for HOTS-oriented learning. Although efforts were made to incorporate 4C competencies—creativity, critical thinking, collaboration, and communication—by encouraging students to engage in critical thinking, problem-solving, reasoning, and conclusion-drawing, the instructional practices remained predominantly focused on lower-order thinking skills. Teachers were also unable to adequately apply the four learning models prescribed in the 2013 Curriculum, which are essential for promoting scientific learning approaches. Furthermore, the instructional activities outlined in the lesson plans were not implemented in a systematic manner. The limited integration of HOTS-based learning was attributed to several challenges encountered by the teachers. These challenges were categorized into three main areas: the teachers' professional competence, the availability and quality of school facilities, and the students' capacity and readiness to engage in higher-level cognitive tasks.

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References

Al Yakin, A., Obaid, A. J., Apriani, E., Ganguli, S., & Latief, A. (2024). The efficiency of blending AI technology to enhance behavior intention and critical thinking in higher education. In *Embedded Devices and Internet of Things* (pp. 242-266). CRC Press.

https://doi.org/10.1201/9781003510420-14.
Ananda, R. (2019). *Perencanaan pembelajaran*. Lembaga Peduli Pengembangan Pendidikan Indonesia (LPPPI).
Apriani, E., Santiana, S., & Harmi, H. (2022). Investigating the Role of ICT toward Students' Higher Order Thinking in Writing Skills at Islamic University Students. *Al-Ishlah: Jurnal Pendidikan*, 14(2), 2213-2224. https://doi.org/10.35445/alishlah.v14i2.2260.
Creswell, J. W., & Poth, C. N. (2023). *Qualitative inquiry and research design: Choosing among five approaches* (5th ed.). SAGE Publications.
Demircioglu, T., Karakus, M., & Ucar, S. (2022). Developing Students' Critical Thinking Skills and Argumentation Abilities Through Augmented Reality-Based Argumentation Activities in Science Classes. Springer: *Science & Education, 32, 1165-1195.* https://doi.org/10.1007/s11191-022-00369-5.
Djami, C. B. N., & Kuswandono, P. (2020). Teachers' strategies to implement higher-order thinking skills in English Instruction. *Metathesis: Journal of English Language, Literature, and Teaching*, *4*(1), 25. https://doi.org/10.31002/metathesis.v4i1.2048.
Feronica, R. A., Apriani, E., & Edy, S. (2021). The implementation of higher order thinking skill (HOTS) in junior high school: teaching practice and problems. *ENGLISH FRANCA: Academic Journal of English*, 5(2), 185-200. https://doi.org/10.29240/ef.v5i2.2589.
Ginting, A. A., & Kuswandono, P. (2020). Challenges faced by English teachers: Implementation of higher order thinking skills (HOTS) in designing assignments in East Indonesia. *Pedagogy : Journal of English Language Teaching*, *8*(1), 13. https://doi.org/10.32332/pedagogy.v8i1.1688.
Kusnawa, W. S. (2012). *Taksonomi kognitif*. Jakarta: PT. Remaja Rosdakarya.
Kwangmuang, S., Jarutkamolpong, W., Sangboonraung., & Daungtod, S. (2021). The Development Of Learning Innovation To Enhance Higher Order Thinking Skills For Students In Thailand Junior High Schools. https://doi.org/10.1016/j.heliyon.2021.e07309.
Movva, S., Alapati, P. R., Veliventi, P., & Maithreyi, G. (2022). The Effect of Pre, While, and Post Listening Activities on Developing EFL Students' Listening Skills. *Theory and Practice in Language Studies, 12(8).* https://doi.org/10.17507/tpls.1208.05.
Munna, A, S., & Kalam, M, A. (2021). Teaching and Learning Process to Enhance Teaching Effectiveness: A *Literature* Review. *International Journal of Humanities and Innovation, 4(1), 1-4. https://doi.org/10.33750/ijhi.v4i1.102.*
Mursyid, M., & Kurniawati, N. (2019). Higher Order Thinking Skills Among English Teachers Across Generation in Efl Classroom. *English Review: Journal of English Education*, *7*(2), 119. https://doi.org/10.25134/erjee.v7i2.1775.
Pahruddin, A., & Pratiwi, D. . (2019). *Pendekatan saintifik dalam implementasi kurikulum 2013 & dampaknya terhadap kualitas proses dan hasil pembelajaran pada MAN di Provinsi Lampung*. Pustaka Ali Imron.
Purnama, Y. I., & Nurdianingsih, F. (2019). The Impact of Higher Order Thinking Skills (HOTS) Instructions in teaching EFL speaking skills from the perspective of students' motivation. *Lingua Cultura*, *13*(4), 313. https://doi.org/10.21512/lc.v13i4.6105.
Feronica, R. A. (2021). The Implementation of Higher Order Thinking Skill (HOTS) in Junior High School: Teaching Practice and Problems. *ENGLISH FRANCA: Academic Journal of English Language and Education*, 5(2), 185-200. https://doi.org/10.29240/ef.v5i2.2589.
Ocy, D. R. (2021). Learning Design to Improve Higher Order Thinking Skills (HOTS). *Jurnal Riset Pendidikan Matematika Jakarta, 3(2), 34-41. https://doi.org/10.21009/jrpmj.v3i2.22265.*
Sani, R. A. (2019). *Pembelajaran berbasis HOTS (higher order thinking skills)*. Tira Smart.
Saraswati, N., & Wicaksono, M. (2023). Novice and Experienced Teachers' Perspectives: Multifactor Challenges in HOTS Implementation. *The Journal of English Literacy Education,* 10(2), 175-185. https://doi.org/10.36706/jele.v10i2.16.

Setiawati, W., Asmira, O., Ariyana, Y., Bestary, R., & Pudjiastuti, A. (2019). Buku penilaian berorientasi higher order thinking skills. In *Kementerian Jenderal Guru dan Tenaga kependidikan*. https://doi.org/10.37411/pedagogika.v10i2.60.

Sitorus, M. M., Silalahi, L. H., Rajagukguk, H., Panggabean, N., & Nasution, J. (2021). The effect of higher order thinking skill (HOTS) in reading comprehension. *IDEAS: Journal of Language Teaching and Learning, Linguitics and Literature*, *9*(1), 455–463.

Susuoroka, G., Momori, I. O., Padmore, E. A. (2023). Teacher Quality Factors as Determinant of Students' Performaance in Mathematics. *Journal of Education and Teaching Methods,* 2(3), 42-49. https://doi.org/10.58425/jetm.v2i3.196.

Tyas, M. A., Nurkamto, J., Marmanto, S., & Laksani, H. (2019). Developing higher order thinking skills (HOTS) – based questions: Indonesian EFL teachers' challenges. *Proceeding of the 2nd International Conference on Future of Education*, *2*(1), 52–63. https://doi.org/10.17501/26307413.2019.2106.

Zulfikar. (2021). Evaluating certified Indonesian EFL teachers' performance: A case study in a high school in Aceh. *ELT Worldwide: Journal of English Language Teaching*, *8*(1), 60. https://doi.org/10.26858/eltww.v8i1.19349.