Integrating Higher Order Thinking Skills (HOTS) Activities to Enhance English-Speaking Proficiency among Form Four Students

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Abstract
The integration of Higher Order Thinking Skills (HOTS) into the teaching of English-speaking skills represents a pivotal strategy in enhancing communicative competence among secondary school students. This study aims to assess the impact of HOTS-based activities on the speaking skills of Form Four students. Using a quasi-experimental design, 30 students with equal academic achievement levels were purposively sampled from a secondary school in Malaysia. The study merged McBer's Competency Theory (1996) with Vygotsky's Constructivist Approach (1978), operationalised through the 5E Instructional Model. Data were collected using pre- and post-tests, classroom observations, and reflective interviews. Analysis was conducted using paired samples t-tests via SPSS version 30. Findings revealed a statistically significant improvement in students' speaking performance [t(29) = -16.709; p < 0.05]. Students showed notable advancement in idea relevance, vocabulary selection, grammatical complexity, register appropriateness, and speech creativity. The study concludes that HOTS activities substantially enrich English-speaking competencies and are suitable for application across other language subjects. The results underscore the commercial and pedagogical value of HOTS in creating critical, articulate learners for the 21st century.
Keywords: Higher Order Thinking Skills, English Speaking Skills, Secondary Education, Instructional Design, Pedagogical Innovation

Introduction
In today's globalised world, English-speaking proficiency is more than an academic requirement—it is a gateway to employability, intercultural communication, and

participation in the knowledge economy. As the lingua franca of international business, science, and diplomacy, English remains central to Malaysia's aspirations of producing globally competitive graduates. However, while many Malaysian learners possess basic knowledge of the language, their ability to speak fluently and confidently often lags behind, limiting their real-world communicative competence (Rahmat & Ismail, 2023). This gap highlights the urgent need for pedagogical approaches that move beyond rote learning and embrace strategies fostering critical and creative use of language.

The integration of Higher Order Thinking Skills (HOTS) into language education has emerged globally as a powerful means of cultivating deeper learning. HOTS, encompassing analysis, evaluation, and creation (Anderson & Krathwohl, 2001), equip learners not only with linguistic accuracy but also with the cognitive flexibility to articulate ideas, argue persuasively, and adapt to diverse communicative contexts. From a theoretical standpoint, Vygotsky's (1978) socio-cultural theory underscores that learning is co-constructed through interaction and scaffolded dialogue, making it highly relevant for HOTS-oriented speaking tasks. Similarly, McBer's Competency Theory (1996) suggests that performance excellence arises from cognitive and behavioural competencies, both of which are cultivated through HOTS-based instruction.

Within Malaysia, education reforms such as the Malaysia Education Blueprint (2013–2025), the Transformasi Sekolah 2025 (TS25) programme, and the integration of school-based assessment underscore the Ministry of Education's commitment to embedding HOTS across subjects (MOE, 2020). These initiatives align with the broader 21st-century learning agenda that emphasises communication, collaboration, creativity, and critical thinking. Yet, despite these systemic efforts, the mastery of English-speaking skills remains a persistent challenge in Malaysian secondary schools, particularly at the upper secondary level where students are expected to demonstrate greater communicative competence. Research on HOTS integration in speaking, however, remains limited compared to reading and writing domains.

This study addresses that gap by investigating the effectiveness of HOTS-based activities in enhancing English-speaking proficiency among Form Four students. Anchored in the 5E Instructional Model (Bybee et al., 2006) and informed by constructivist principles, the study examines how targeted tasks—such as problem-solving, debates, and reflective storytelling—can improve both linguistic performance and cognitive engagement. By situating speaking instruction within HOTS-driven pedagogy, this research contributes to the ongoing discourse on how Malaysian classrooms can better prepare students to think critically and communicate effectively in a globalised era.

Objectives of the Study
This study is guided by the following objectives:
  i.   To examine the effectiveness of HOTS-based instructional activities in improving the English-speaking proficiency of Form Four students.
  ii.   To explore students' perceptions of the HOTS-integrated speaking tasks implemented in the classroom.
  iii. To identify specific linguistic improvements in students' speaking performance as a result of HOTS implementation.

iv.   To evaluate the role of Middle Leaders (ML) in facilitating the integration of HOTS in English language instruction.

Literature Review

Emerging evidence from Southeast Asian ESL contexts supports the notion that collaborative learning structures amplify the benefits of HOTS integration. According to Cheong et al. (2023), cooperative activities like peer debates and structured group discussions promote language uptake and stimulate analytical reasoning. In addition, interactive technologies such as Padlet and Flipgrid have been shown to support oral rehearsal and asynchronous critical reflection, fostering deeper engagement with speaking tasks (Zaini & Murad, 2020). These digital platforms offer inclusive opportunities for less confident speakers to participate.

Recent literature further supports the integration of metacognitive strategies within HOTS activities to elevate speaking proficiency. Tan and Nordin (2022) emphasised that self-questioning, reflective prompts, and peer evaluation in speaking tasks significantly improved learners' articulation and critical reasoning. Similarly, Kaur and Choo (2021) found that when ESL students were encouraged to assess their own oral responses against performance criteria, they demonstrated increased autonomy and speaking confidence. This reflects a shift toward learner-centred, self-regulated language learning environments, aligning with the 21st-century skills agenda.

Speaking is a productive language skill that involves real-time processing and articulation (Brown & Abeywickrama, 2019). It is recognised as one of the most challenging skills for second language learners to master. According to Richards (2008), speaking proficiency depends not only on fluency and accuracy but also on the speaker's ability to express ideas effectively and engage the audience.

Studies by Goh and Burns (2012) underscore the importance of cognitive engagement in speaking activities, suggesting that HOTS can elevate not only fluency but also depth and clarity of expression. According to Rahmat and Ismail (2023), Malaysian ESL learners often exhibit reluctance in speaking tasks due to lack of vocabulary and confidence, which can be mitigated through structured HOTS-oriented instruction. Yunus and Arshad (2020) also emphasise that students' active involvement in critical thinking activities directly correlates with increased motivation and willingness to speak.

McBer's Competency Theory posits that high performance in tasks arises from a blend of cognitive, emotional, and behavioural competencies (McBer, 1996). Meanwhile, Vygotsky's (1978) socio-cultural theory of learning argues that knowledge is co-constructed through interaction and guided instruction ideal for HOTS-driven speaking tasks. The 5E Instructional Model (Bybee et al., 2006), comprising Engage, Explore, Explain, Elaborate, and Evaluate, provides a practical framework to implement constructivist learning strategies effectively in language classrooms.

Additional studies support the integration of constructivist pedagogy in second language learning. For instance, Mohd Noor and Hashim (2021) found that students who participated in inquiry-based and problem-solving speaking tasks were better able to

articulate their thoughts with coherence and purpose. These findings further justify the relevance of using HOTS in the Malaysian ESL classroom.

Methodology
This study utilised a quasi-experimental design involving a single group of 30 Form Four students from a public secondary school in Perak, Malaysia. Participants were purposively selected based on similar academic standing to ensure homogeneity. The intervention consisted of eight 45-minute sessions conducted over four weeks, incorporating HOTS activities aligned with the 5E Model.

The lesson plans integrated tasks such as collaborative problem-solving, role plays, scenario analysis, reflective storytelling, and project-based learning. These activities were designed to promote higher-order thinking and were scaffolded according to students' proficiency levels. Each session followed the 5E Model phases, beginning with activating prior knowledge and ending with student self-evaluation.

Data were collected through pre- and post-speaking tests scored using a rubric adapted from the CEFR (Council of Europe, 2020), classroom observations, teacher journals, and semi-structured interviews. The quantitative data were analysed using paired samples t-tests, while qualitative data underwent thematic analysis.

Results
Statistical analysis revealed a significant improvement in students' post-test scores compared to their pre-test results $[t(29) = -16.709; p < 0.05]$. The mean score increased from 57.3 to 81.6, indicating considerable gains in speaking proficiency. Observational data confirmed students' improved articulation, confidence, and willingness to engage in classroom discourse.

Thematic analysis of interview data indicated four core improvements:
  i. **Relevance of Ideas** – Students began articulating responses that directly addressed task prompts.
 ii. **Lexical Resource** – Vocabulary became more precise, varied, and contextually appropriate.
iii. **Grammatical Range and Accuracy** – Increased usage of compound and complex sentences.
 iv. **Communicative Confidence** – Students exhibited reduced anxiety and initiated speaking turns independently.

Moreover, the role of task authenticity in HOTS-based instruction cannot be overstated. Latif and Isa (2023) highlighted that real-world speaking simulations—such as mock interviews, debates on current issues, and collaborative decision-making—enhance learners' communicative competence by making learning relevant and personally meaningful. This real-world linkage is essential in ensuring transferability of speaking skills beyond the classroom. Additionally, Middle Leaders play a pivotal role in sustaining HOTS implementation by modelling best practices, mentoring peers, and monitoring classroom-based innovations. Their instructional leadership fosters a culture of reflective practice, ensuring that HOTS remains an embedded pedagogy rather than a one-off initiative (Yusof & Hamid, 2022).

Discussion

The data also align with global findings indicating that sustained HOTS instruction fosters not just linguistic but affective gains, including learners' self-efficacy and perseverance. Embedding HOTS across subjects—including English—also signals to students that critical thinking is not confined to specific disciplines. Furthermore, when students see purpose in their speaking through real-world problems or authentic audiences—they engage more meaningfully and construct responses that reflect both language proficiency and analytical depth.

The results demonstrate that HOTS activities foster significant improvement in students' speaking skills. This aligns with findings by Zulkifli and Yunus (2021), who reported enhanced oral communication outcomes in learners exposed to tasks requiring analysis and evaluation. The 5E Model's structured flow ensures that learning is scaffolded, with each phase encouraging deeper engagement. The socio-cultural element of HOTS implementation, particularly through peer collaboration and teacher facilitation, aligns with Vygotsky's notion of the Zone of Proximal Development (ZPD). Within this zone, learners accomplish more complex tasks with guidance. Speaking tasks designed with this in mind enable learners to take ownership of their communicative development.

Moreover, incorporating McBer's theory into HOTS tasks enriches emotional and behavioural competencies, such as resilience, openness to feedback, and persistence—traits crucial in mastering speaking. Technological: HOTS-oriented speaking tasks can be supported through AI-driven applications such as automated speech feedback tools, digital storytelling apps, and peer feedback platforms that promote iterative refinement of ideas (Lim & Khalid, 2021).

Implications

Assessment: School-based assessment systems should evolve to capture the nuances of HOTS-driven speaking tasks, including creativity, logic, and argumentation. Rubrics need to reflect these cognitive indicators, moving beyond fluency and accuracy alone.
This study presents several implications for stakeholders in education:

i. **Pedagogical:** Teachers should design and implement HOTS-oriented tasks that encourage real-life communication and critical reflection. Training programmes should include modules on the 5E Model and task design.
ii. **Curricular:** Curriculum developers should embed HOTS into the learning outcomes and suggest sample speaking activities aligned with CEFR standards.

Another limitation worth considering is the role of teacher readiness. As HOTS demands a shift in pedagogical mindset, future research could examine the professional development needs of English teachers, especially in designing cognitively rich speaking tasks. Investigating how school culture and leadership influence HOTS uptake can also shed light on systemic barriers and enablers. Studies could further explore the integration of HOTS in multilingual classrooms where students navigate between different linguistic repertoires.

i. **Policy:** Policymakers should allocate resources and provide continuous professional development on HOTS implementation across subjects.

ii.   **Technological:** HOTS tasks can be digitised into speaking apps and modules to allow asynchronous practice and formative assessment.

Limitations and Future Research
While the study yielded promising outcomes, several limitations must be acknowledged. First, the sample size was relatively small and drawn from a single secondary school in Perak, which may affect the generalisability of the findings to other educational contexts. The quasi-experimental design lacked a control group, which could have strengthened the internal validity of the results. Additionally, the short intervention period may not fully capture the long-term effects of HOTS on speaking development.

Future studies should consider expanding the sample size to include a diverse range of schools across different regions, including urban and rural settings. Incorporating a control group in future research designs will allow for more robust comparisons and causal inferences. Longitudinal studies spanning an entire academic year or more would provide valuable insights into the sustainability and progression of speaking skills over time. Furthermore, exploring the integration of HOTS through digital learning environments—such as AI-supported speaking assistants, gamified speaking platforms, and virtual reality simulations could yield richer data on student engagement, motivation, and performance. Researchers may also investigate how Middle Leaders influence the consistency and effectiveness of HOTS implementation across departments and subjects.

Conclusion
The integration of Higher Order Thinking Skills (HOTS) into English-speaking instruction significantly enhances students' oral performance, critical thinking, and classroom engagement. By employing the 5E Instructional Model and grounded in constructivist principles, the study demonstrated that HOTS-based activities encourage learners to think deeply, communicate confidently, and engage meaningfully with content.

Students not only showed measurable improvements in fluency, vocabulary, and grammar but also developed soft skills such as teamwork, creativity, and resilience. These outcomes align with the goals of 21st-century education, which prioritise the development of holistic learners equipped with both linguistic and cognitive competencies.

This study reaffirms the role of English language classrooms as platforms for holistic development. It also underscores the importance of teacher facilitation, peer scaffolding, and authentic task design in nurturing articulate, reflective speakers.

To realise this potential at scale, it is imperative that educators, Middle Leaders, and policymakers work collaboratively to institutionalise HOTS practices in schools. Strategic professional development, digital resource integration, and policy support will ensure that HOTS becomes a sustained and embedded feature of language instruction across Malaysia and beyond.

As Paulo Freire once said, *"Education does not transform the world. Education changes people. People change the world."* With HOTS as the vehicle, we can empower students not just to speak—but to speak with purpose, power, and passion.

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