

# PROJECT-BASED LEARNING INTEGRATED WITH HIGHER-ORDER THINKING SKILLS (HOTS) ASSESSMENT TO ENHANCE STUDENTS' SPEAKING SKILLS IN THE EFL CLASSROOM

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## ABSTRACT

This study examined the implementation of project-based learning (PBL) integrated with HOTS assessment in helping students develop their English-speaking skills. In addition, this study sought to explore the challenges faced by the teacher when implementing PBL with HOTS assessment. Using classroom action research (CAR) involving 32 ninth-grade students of a junior high school, qualitative and quantitative data were gathered in two cycles. The quantitative data were obtained via speaking tests whereas the qualitative data were acquired through interviews and observations. This research indicated that project-based learning through HOTS assessment helped the students hone their speaking skills as they had more chances to practise speaking. The students were more confident to speak in English. They actively participated during the discussion and could think creatively while performing the project. However, the teacher faced challenges as there were still students with a low mastery of vocabulary and a lack of participation in designing mini-drama scripts.

PBL with HOTS assessment can be used as an alternative to facilitate students' speaking practice in the EFL classroom.

**Keywords:** project-based learning; HOTS assessment; speaking skills; classroom action research

## Introduction

Mastering the skill of speaking English has become one of the hallmarks of students' proficiency in the English language (Pervaiz et al., 2022). Speaking skills are the ability to effectively convey information to the speaking partners using varied expressions. As productive skills, there are two critical components of speaking: accuracy and fluency (Nawshin, 2009). Accuracy refers to how students can speak the language accurately without mistakes in grammar and pronunciation (Wahyuningsih & Afandi, 2020). Fluency refers to how appropriate and confident students are in utilising the language. Fluent students will speak without hesitation, awkward pauses, false starts, or word searching (Koizumi, 2005). In addition, the ability to fulfill pragmatic goals is also considered as the yardstick of successful mastery of speaking skills (Brown, 2001). To facilitate the students in mastering the skills, it is necessary to conduct English language classroom instruction that drives them to enhance their speaking potential.

One of the ways to optimise the students' speaking performance is via classroom assessment that involves critical and creative thinking (Terenzini et al., 1995). The HOTS assessment could drive students to speak English more creatively. Endowed with critical thinking and complex problem-solving skills, students can explore their English-speaking potential. HOTS assessment encourages them to speak English by applying their knowledge in various real-world contexts (Purnama & Nurdianingsih, 2019). It can supposedly allow students to improve their speaking mastery to address 21st-century skills including critical thinking, decision-making, problem-solving, communication, cooperation, responsibility, and creativity (Hilt et al., 2019). In this regard, the use of the HOTS assessment is inseparable from the revised Bloom Taxonomy (Mitani, 2021). It involves cognitive processes that include analysing, evaluating, synthesising, and creating new knowledge. As many EFL students struggle to develop these skills, it is necessary to implement the HOTS assessment that allows students to communicate effectively and engage in critical discussions. Therefore, a practical HOTS assessment is needed to promote the students' critical thinking in speaking.

Nowadays, EFL learning should allow students to be creative and critical in completing projects. Traditional methods should no longer dominate classroom instruction. Those methods allow students to be passive listeners and do not give them room to develop their interests. It will hinder learning output, making students less creative and productive. Hence, new, innovative learning and assessment methods are pivotal to helping students achieve a higher level of critical thinking (Rahmah et al., 2019). This aligns with one of the aims of the Indonesian's 2013 curriculum which is to strengthen the quality of education via attitude, skill, and knowledge. To face the globalisation era, the 2013 curriculum endorses students to

nurture their high critical thinking to grasp different concepts, solve problems, discover new things, develop reasoning, and create good decisions. To address those needs, project-based learning (PBL) is a relevant, novel teaching method that allows students to speak English more creatively.

Project-based learning, recognised as a student-centered teaching method (Sari et al., 2023), prioritises active exploration, problem-solving, and collaboration (Padmadewi et al., 2023). This approach involves students in complex projects addressing real-world challenges, emphasising skills in problem-solving and handling (Zen et al., 2022). The core objective of PBL is to cultivate critical thinking, problem-solving, and decision-making skills. Successfully implemented in EFL language learning, PBL enhances speaking skills by allowing students to engage in intricate projects that stimulate creative thinking and problem-solving abilities (Santoso et al., 2021). Offering opportunities for authentic tasks, PBL promotes the use of higher-order thinking skills (Walters-Williams, 2022). Working on PBL projects enables students to develop critical thinking, problem-solving, and decision-making skills through problem identification, analysis, information evaluation, solution generation, and evidence-based decision-making (Dabbagh, 2019). This approach fosters more creative and productive use of English in speaking. These studies show that PBL can enhance students' English language skills. However, there is still no analysis of how far HOTS assessment can specifically lead the students to develop their speaking skills.

Therefore, this study investigated the implementation of PBL integrated with HOTS assessment to facilitate the students' practice of English speaking skills. In its implementation, HOTS indicators were incorporated into their speaking assignments. The study aimed to address two research questions:

- (1) how can project-based learning with HOTS assessment facilitate students in developing English speaking skills? and
- (2) what are the challenges and benefits of the PBL implementation coupled with HOTS assessment for teaching speaking skills?

## **Literature Review**

### **The Nature of English Speaking Skills and HOTS Assessment**

Acquiring English speaking skills is challenging for students (Halimah, 2018), which necessitates smooth and accurate expression. Key linguistic factors influencing success include vocabulary, pronunciation, grammar, fluency, and accuracy (Gani et al., 2015; Leong & Ahmadi, 2017). To enhance proficiency, EFL students should prioritise productive lexical knowledge (Tong et al., 2022), and refine accuracy and fluency through various activities (Derakhshan et al., 2016). Brown (2004) recommended speaking activities to encompass intensive practice for phonological and grammatical mastery, interactive exchanges for greetings and small talk, transactional dialogue for specific information exchange, and interpersonal dialogue for social connections and knowledge dissemination. Interpersonal speaking performances include interviews, role plays, chats, discussions, and games. In the EFL classroom, teachers can incorporate extensive monologues such as oral summaries, reports, stories, and brief speeches (Brown & Lee, 2015). Nurturing speaking involves

engaging in activities such as role-playing, simulations, discussions, prepared talks, questionnaires, and scripted acting (Harmer, 2007).

The Indonesian curriculum emphasises speaking competence, requiring accuracy, fluency, and appropriateness in daily conversations, aligned with the school-based curriculum and English learning standards for junior high school (Prasetyono et al., 2021). To enhance speaking, a novel approach that employs higher-order thinking skills (HOTS) assessments while fostering critical, logical, reflective, metacognitive, and creative thinking among students should be pursued (King et al., 2017). HOTS implementation, based on Revised Bloom's Taxonomy (RBT), comprises cognitive skills including analysis, synthesis, and evaluation, organised hierarchically from basic to advanced levels (Anderson & Krathwohl, 2001). In speaking instruction, HOTS can be optimised in both methodology and assessment. Teachers can integrate HOTS into English-speaking assessments using RBT's cognitive process dimensions, ranging from cognitive 1 to cognitive 6. For example, narrative texts aligned with RBT can be employed in project-based learning (PBL) activities, prompting students to create dialogue scripts (apply level), analyse conflict causes (analyse level), and modify stories (create level). These HOTS-based questions within PBL enhance students' creative thinking and speaking skills.

### **Project-Based Learning for Teaching Speaking Skills in EFL Classroom**

It is the responsibility of English language teaching practitioners to conduct creative and innovative learning in their EFL classrooms. Innovative learning can be fostered through a flexible learning process that utilises a wide array of possible methodologies. EFL teachers should boost the students' critical thinking via learning activities they design. In the 2013 curriculum, one innovative learning suggested is project-based learning (PBL). Employing PBL in the classroom is expected to encourage the students' learning experience and participation in class. Using PBL aligns with the goal of the 2013 curriculum to increase the quality of education to nurture attitude, skill, and knowledge of students in order to face globalisation. Through PBL, students are expected to develop high critical thinking to interpret different concepts, solve problems, discover new methods, and make good decisions.

Several studies highlight the positive impact of PBL on English speaking skills, enhancing listening and speaking abilities (Ekawati, 2017). PBL not only addresses real-world problems (Al-Busaidi & Al-Seyabi, 2021) but also significantly influences students' productive skills (Putri, Artini, & Nitiasih, 2017). The benefits of PBL in speaking instruction include contextual and meaningful learning, an optimal environment for practice, increased motivation, enjoyment, and social learning (Zhang, 2015). While PBL is widely used for classroom teaching, there is a scarcity of research on integrating HOTS into PBL for English teaching.

### **Research Methodology**

This study employed Classroom Action Research (CAR) to examine the implementation of PBL with HOTS assessment in enhancing students' English speaking skills. The objective was not rapid improvement but rather the honing of speaking

skills through innovative learning. Conducted in two CAR cycles, each involved planning, implementation, observation, and reflection (Kemmis & Taggart, 1988). The research commenced with action planning, followed by classroom implementation. Observations during implementation scrutinised student learning progress, leading to reflective analysis of the obtained data. The three phases of our PBL approach, based on Stoller (2006), consist of planning (selection of project topic, use of pre-communicative activities, formulation of key questions, design of project plan, creation of project timeline), implementation, and reporting (evaluation of the project, its results, and learning activities).

The study was conducted in an Islamic junior high school in Indonesia, and 32 ninth-grade students were selected through purposive sampling.

The instruments included speaking test questions aligned with HOTS levels based on the revised Bloom Taxonomy by Anderson and Krathwohl (2001) and a speaking rubric adapted from Brown (2001) shown in Table 1, which assessed students' English speaking performance. In project-based learning, authentic material from a YouTube channel was utilised, with students creating fable stories based on illustrations. The scoring rubrics covered fluency, pronunciation, comprehension, and grammar, each assessed on a scale of 1 to 5. The rubrics were adapted from Harries (1984) and Brown (2004). The speaking assessment aimed to evaluate four aspects of proficiency: comprehension, grammar, fluency, and pronunciation.

**Table 1**  
*The Speaking Grade Rubric*

Speaking Indicators	Scores	Description
Fluency	1	(No Specific fluency description. Refer to the other four language areas for implied level of fluency)
	2	Can handle with confidence but not with facility most social situations, including introductions and casual conversations about current events, as well as work, family, and autobiographical information.
	3	Can discuss particular interests that interfere with competence with reasonable ease.
	4	Can participate in any conversation within the range of this experience with a high degree of fluency.
	5	Has complete fluency in the language
Pronunciation	1	Errors in pronunciation are frequent but can be understood by a native speaker.
	2	An accent is intelligible, though often faulty.
	3	Errors never interfere with understanding and rarely disturb the native speaker. The accent may be foreign.
	4	Errors in pronunciation are quite rare.
	5	Equivalent to and fully accepted by educated native speakers.
Grammar	1	Errors in grammar are frequent, but it can be understood by a

		native speaker.
	2	Can usually handle elementary constructions quite accurately but may not have thorough or confident control of grammar.
	3	Control of grammar is good. Able to understand and speak the language at a normal rate of structural accuracy.
	4	Grammar errors are quite rare.
	5	Equivalent to that of an educated native speaker.
Compre hension	1	Within his very limited experience, he can understand simple questions and statements if delivered with slowed speech, repetition, or paraphrasing.
	2	Can get the gist of most conversations on non-technical subjects
	3	Comprehension is quite complete at a rarely disturbed level with sufficient speech.
	4	Can understand any conversation within the range of his experience.
	5	Equivalent to that of an educated native speaker.

The PBL stages encompassed planning (selecting topics, titles, and characters), implementing (drafting, seeking teacher assistance, revising, and submitting stories), and reporting/evaluating (presenting mini-dramas from their scripts) (Stoller, 2012). Table 2 shows the Project-Based Learning Timelines within the Classroom for the group project.

**Table 2**  
*The Project-Based Learning Timelines within the Classroom [Group Project]*

Group Worksheet			
Project	Performing a mini-drama performance of a narrative text story (fable)		
Project Description	Write a script developed from the narrative story (fable) Divide the group members as the project leader, narrator, and actors to present the script into a mini-drama performance Perform the drama show and complete the reflection task		
Illustration	<i>In the forest, several animals were living there. The animals lived side by side such as a deer, monkeys, birds, a lion, and a tiger. Perform a mini-drama based on the illustration!</i>		
Project time line	Cycle 1	Planning	<ul style="list-style-type: none"> <li>Dividing the group project</li> <li>Selecting the theme of story</li> <li>Selecting narrative story based on the theme</li> </ul>
	January, 9 <sup>th</sup> 2023	implementing	<ul style="list-style-type: none"> <li>Developing and creating</li> </ul>

		Evaluating	<ul style="list-style-type: none"> <li>the drama script.</li> <li>Revising the story script.</li> <li>Dividing the characters of drama performance (narrator, players, project leader)</li> </ul>
Cycle 2	January 11 <sup>th</sup> , 2023	Implementing	<ul style="list-style-type: none"> <li>Memorizing the script</li> <li>Practice acting out</li> <li>Making and looking for the drama equipment</li> </ul>
		Evaluating	<ul style="list-style-type: none"> <li>Overcoming the challenges of speaking obstacles on drama and project preparation</li> </ul>
Cycle 2	January 16 <sup>th</sup> , 2023	Reporting	<ul style="list-style-type: none"> <li>Performing the drama</li> </ul>
		Evaluating	<ul style="list-style-type: none"> <li>Assessing the speaking competence for the performance</li> </ul>

A consent letter was provided to research participants (the teacher and his students). An official letter was also issued, proving that permission to conduct the study was granted. To protect the participants' identities, pseudonyms were used for documentation. Data collection methods involved speaking tests, observations, and interviews.

The interviews explored why and how teachers used project-based learning (PBL) in English teaching, including designing critical thinking questions. Student interviews focused on their PBL experiences, covering what they liked, challenges faced, speaking skill improvements, and their views on PBL's effectiveness. A reflection session followed, looking at PBL's impact, challenges, insights from students, and strategies for improvement. Additionally, an observational checklist gauged student collaboration, communication, critical thinking, creativity, problem-solving, effort, engagement, and oral skills during a specific PBL project. The checklist aimed to capture improvements in pronunciation, intonation, and expression, offering a comprehensive assessment of students in the PBL context.

The study was conducted according to the guidelines of the University of Hull and approved by the Institutional Review Board (or Ethics Committee) of Jenderal Soedirman University (Protocol Code: 021/HRE/LoI/XI/2022 (approval date: 15 November 2022)).

## Results and Discussion

### Project-based Learning with HOTS Assessment and English Speaking Skills

#### *The First Cycle*

In the planning stage, the teacher determined the learning outcomes based on the basic competencies of the syllabus. The teacher made a lesson plan consisting of the 90-minute learning steps using PBL (see Appendix 1). The core activities used 70 minutes of the total lesson time. The teacher also prepared a project worksheet (Appendix 2), PowerPoint presentation materials, and learning videos taken from the YouTube channel *English Pedia*. The teacher also compiled assessment sheets, attendance sheets, and documentation tools. The second stage in the first cycle was action. In a group of six persons, students were given illustrative questions in the form of descriptions of animals living in the forest. The questions were used for developing narrative text for the mini-drama project.

Students composed unique and simple narrative text with clues based on the questions. The questions were given to each group. Given enough time, they started discussing how to develop their story. The teacher approached each group to monitor their progress. The students then created a short narrative text draft to be performed in the mini-drama. The final stage in this first cycle was reflection. The teacher helped correct and revise the students' draft of the story. Afterward, they read it aloud and determined the title, the main paragraph, and its structure. The teacher allowed students to discuss again to determine the characters in the story.

### ***The Second Cycle***

In this cycle, the students practised the mini-drama based on their narrative text with the theme of an animal story living in the forest. In the planning stage, the teacher prepared media for teaching including PowerPoint slides, speaking assessment sheets, and evaluation and reflection worksheets. This discussion sheet included HOTS questions regarding moral values, personality characters, problems in the story, as well as its problem-solving.

In the action stage, the teacher informed the speaking assessment criteria. The discussion and reflection sheets were distributed to each group. Each group of three boys and three girls would perform approximately within 15 minutes. Each group came forward to present the mini-drama and dialogue according to the story. In the group, some performed as the story characters, and the rest served as the story's narrators. After the performance, they were given reflection and evaluation sheets (see Appendix 3) to discuss and complete. Next, the sheets are submitted to the teacher. In the sheet, there were HOTS questions related to moral values, what the students can learn from the story, the characters, the problems in the story which are relevant to everyday life, and the solutions to the problems. This was the assessment or evaluation stage in the last cycle. Figure 1 shows the results of the overall speaking assessment on the narrative text project using the speaking criteria from Brown (2001) including fluency, pronunciation, grammar, and comprehension.

Figure 1 shows the results of the students' English-speaking performance. The standard minimum set by the teacher was 75. The minimum score for an English lesson was taken from the teaching guidelines of the school-based curriculum education unit. Among 32 participants in this study, 30 could pass the minimum criteria. Unfortunately, two students could not meet the minimum criteria. The mean score of the students' speaking test was 84.8. The results showed that the students

could develop their English-speaking skills through the PBL project that pushed them to think, discuss, practice, and perform. As stated by Anderson and Krathwohl (2001), the HOTS assessment can increase the cognitive domain level of students because they undergo cognitive processes such as recognising the theme and plot story, creating and producing the script, executing the script story, and evaluating and criticising the lack of performance. It means through the reflection of the score, the PBL via the HOTS assessment could facilitate the students to develop their English speaking skills. It echoes the research results from Abdul et al. (2021) in that project-based speaking learning, as an innovative learning method, can improve students' speaking skills in school contexts. Based on the speaking skill indicators, the students could surpass the minimum score (see Figure 1).

**Figure 1**  
*The Results of the Students' Speaking Assessment*

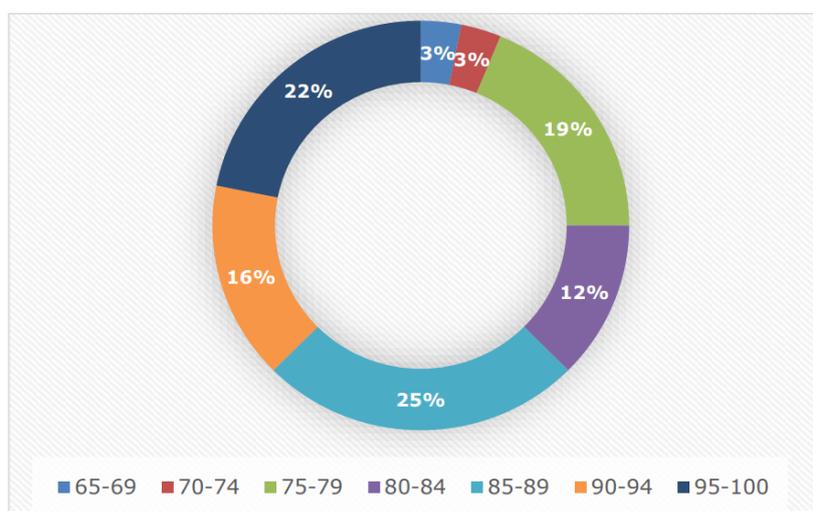


Table 3 illustrates the number of students passing the minimum score for each indicator of speaking skills. For fluency, the minimum score indicated that the students could discuss specific matters in the story with reasonable ease. In terms of pronunciation, they demonstrated that errors never hindered understanding and rarely disrupted comprehension. Grammar errors rarely occurred, and there was a good level of comprehension in delivering the content of the stories. From the graph, 30 to 32 students could speak English proficiently with minimal pronunciation errors. On the grammar aspect, the students still faced challenges in constructing sentences and using correct grammar. For comprehension, they had a sufficient understanding of the plot, characters, and conversations. The results above reflect similarities with research results from Riswandi (2018) that PBL also successfully improved speaking skills elements of fluency, pronunciation, grammar, and comprehension.

Based on the results of observations and document analysis, the teacher had prepared a lesson plan, teaching equipment, and good PPT materials. Lesson plans contained learning methods for project-based learning. Worksheets for student assessments had also been prepared. The project worksheet contained illustrative

descriptions of several animals that lived in the forest together. The students were asked to compose a narrative text involving the animals. Based on observations, after the students received the worksheet, they directly discussed the animal characters to be used as the title and the story's cast. They discussed how to arrange the storyline. They then designed the story draft with the assistance of the teacher and the dictionary they brought. They discussed it enthusiastically while designing the narrative text and preparing for the performance. They asked questions and consulted the teacher about the storylines. The titles of the stories were various: "The Deer and The Bird", "The Clever Monkey", "The King Lion", and "The Poor Tiger". They then assigned each member to have certain roles. Afterward, they again consulted the teacher concerning appropriate pronunciation and intonation. Each group was given one week to practise the mini-drama based on the script.

**Table 3**  
*The Number of Students Passing Each Speaking Indicator*

Indicator	Number of students
Fluency	32
Pronunciation	30
Grammar	22
Comprehension	25

### **Challenges and Benefits of PBL Learning with HOTS-based Assessment**

There were challenges and benefits of implementing PBL learning with HOTS assessment for teaching English speaking (see Table 4). Even though the students were energetic in designing the script and practising the pronunciation and intonation, there were still problems regarding language use. Some students could not translate their L1 Indonesian text into some English words. They had to check the dictionary and ask the teacher. In addition, there were some students who were rather passive and did not follow the discussion. Fortunately, the discussion could run well since other members were enthusiastic and did not hesitate to ask the teacher. The presence of the teacher was very helpful in scaffolding students on how to construct sentences, translate the script, and practise the intonation and pronunciation of the script.

**Table 4**  
*Challenges and Benefits of PBL Learning with HOTS-based Assessment*

Group	Challenges	Benefits
Group 1 (6 Students) The Deer and The Bird	Several group members lacked confidence but still successfully memorised the entire script. There was one	The group presented interesting storylines from both main characters. Moral values were very meaningful

	shy and less expressive student in carrying out his role.	and appropriate for their daily lives. The story was very dramatised very well with good use of props.
Group 2 (6 Students) The Clever Monkey	The group was not yet able to combine the sound to make it more interesting. The group did not finish within the given time as the story script presented was rather long.	Moral values were very meaningful and appropriate for their daily lives.
Group 3 (6 Students) The King Lion	There were several sentences spoken with inaccurate grammar.	All players showed amazing fluency, intonation, and expressions.
Group 4 (5 Students) The Poor Tiger	There were few sentences spoken with inaccurate grammar. There was a shy group member.	Overall, a good stage act was also supported by props and tools that supported each scene.

The students enjoyed and enthusiastically participated in the mini-drama performance. They had high confidence in carrying out each role. Their voices were loud and full of facial expressions, varied intonations, or body movements. In addition, they were able to memorise the scripts completely. Many enjoyed each of the characters' roles. They were able to understand the contents of the story. Their performances were well-prepared with supporting sound, unique and varied costumes, and props. However, there were still a few students who still felt embarrassed and nervous before the performance. Several students did not utilise the grammar appropriately when performing the mini-drama.

The advantage of using PBL is that when the students discuss the mini-drama project, each group member should choose one of the characters from the story (Mardiani & Hanifah, 2023). The project preparation activities embrace student-centered learning. The outcome will be better when students work together to complete the project.

To triangulate the results of observations, interviews were done with the teacher. The aim was to address several questions regarding the motivation for using project-based learning, the benefits of using HOTS in work projects, and the challenges of implementing HOTS-based project-based learning.

The following is the teacher's motivation for implementing the PBL:

... the motivation for using project-based is because I see students' interest in practicing speaking. Apart from that, since the theoretical material and reading and writing questions have been implemented, this is the time for me to test my speaking project with worksheets made according to the HOTS standard so that they can think

critically, be creative, and write their own texts.

The teacher employed project-based learning since he had observed the students' interests in speaking exercises. Besides, assessing speaking using HOTS-based worksheets can allow students to think creatively. In the interviews, the teacher also explained the procedure for making HOTS questions:

... I designed the project sheet according to basic competency within the syllabus related to narrative text with the aim of learning to design the text and present it in a role-play. From that point, at the 3rd meeting of narrative text, the project sheet began with stimulating illustrations of living animals in the forest related to the narrative text (fable). With this sheet, they have entered into HOTS by encouraging them to design, create, and discuss.

The teacher created the project sheet appropriate to the basic competency based on the curriculum. The project sheet allowed the students to answer HOTS questions based on the Revised Bloom's Taxonomy. Implementing PBL through HOTS assessment allows the students to develop their English speaking more creatively. There are benefits that the students can obtain from such PBL. However, there are still challenges to the PBL implementation in the EFL classroom. The following are the challenges and benefits of using PBL with HOTS assessment for teaching English speaking skills:

... The advantage of using integrated PJBL with HOTS assessment is that they can explore themselves and be more creative and innovative in making text according to their preferences. During performance, improve speaking skills with confidence and good independence in preparing the drama from memorisation, daily practice, and preparation of equipment.

As for the obstacles, they already have storyline ideas, but for translating, they needed the teacher's help, especially in grammar. Some students were passive and didn't contribute much because there may already be a chairman or persons in charge, so they only accepted decisions about the division of roles. However, they were still professional and did their best in the performance.

In addition, the students were also interviewed with regard to their feelings after performing the project and whether the project helped improve their speaking skills. From the interviews, the students acknowledged that the PBL project was fun and challenging.

I also enjoyed myself! I created an animal-themed project. Sharing what I learned and presenting it to the class was enjoyable. However, as you might imagine, it was a little difficult to finish for drama play.

It was really fun! We were given the chance to select our project topic, and I chose for something that truly fascinated me. It was empowering to be in control, and I gained a wealth of knowledge from the experience.

According to Helle et al. (2006), PBL is a method of instruction based on practical projects that provide students with problems connected to their daily lives that they must solve in groups. They worked hard to produce a simple and easy-to-memorise narrative text so that they could prepare well within two weeks. In the preparation process, their vocabulary mastery improved. Each group competed with each other to get good grades, especially with regards to stage act, voice level, intonation, pronunciation, gesture, and costume preparation. It could help the students to overcome their shyness and laziness in performing the project. In addition, the PBL project could enhance a sense of togetherness and responsibility. Cooperative learning was nurtured via intensive discussion and exchange of opinions with group members. Those are related to the study from Ferianda and Mukartaro (2017) that PBL could improve students' cooperative learning and personal development such as responsibility and collaboration. The results of the test show that the students could develop speaking skills via project-based learning. They could hone their fluency and pronunciation through regular training with their group both in and outside the class. Furthermore, their struggle in memorising the stories helped them to perform the mini-drama successfully.

Despite the HOTS assessment's one-week preparation involved text analysis, students demonstrated confidence in speaking English and presenting expressive portrayal of characters during the project. This aligns with Bell (2010), who postulated that project-based learning enhances attention, motivation, engagement, and enjoyment. Initial passivity in discussions transformed into active roles with loud voices and clear articulations. Through PBL, students exhibit creative and critical thinking, collaboratively decide on the title, storyline, characters, conflicts, ending of the mini-drama, and reflect on their insights into animal fables (Bell, 2010). Additionally, they engaged in peer correction for pronunciation during preparation, culminating in an interactive learning approach (Bell, 2010).

Students demonstrated improved participation and creativity in PBL, enhancing project preparation and understanding through collaborative discussions and peer correction (Shin, 2018). The HOTS assessment encouraged creative idea development, aligning with Riza and Setyarini's (2020) argument that HOTS-based questions significantly enhance students' speaking skills. Wurdinger and Qureshi (2015) support this, asserting that PBL fosters creativity, self-directive learning, problem-solving, and communication. Students engaged in self-reflection through a self-evaluation sheet, addressing HOTS questions for further improvement. However, PBL implementation faced challenges, particularly in guiding students on translating words and constructing sentences in past tense, resulting in low performance in English grammar. Some students were less participative, necessitating additional efforts from the teacher to encourage them to be more active. Overcoming participation issues involves creating a safe and supportive environment where each

student shares ideas equally, receives feedback, and gains motivation to speak (Ur, 1998).

### Conclusion

This study showed that the implementation of project-based learning (PBL) combined with Higher-Order Thinking Skills (HOTS) assessment improved students' English speaking skills. The study employed Classroom Action Research (CAR) observation, PBL speaking worksheets and assessments, as well as documentation methods. The students improved their speaking competence, creativity, critical thinking caused by the HOTS assessment, and confidence in performing in English language. These findings suggest that PBL combined with HOTS assessment can be a valuable learning model for improving students' speaking abilities. The study's limitations, however, include its specific educational context and emphasis on speaking skills. Future research should address these limitations by conducting longitudinal studies in a variety of educational settings and investigating the possibility of adapting this learning model to digital or online learning environments. In addition, investigating the integration of PBL with HOTS assessment in multilingual or ESL contexts represents an intriguing future research avenue. Overall, this study sheds light on the potential of PBL with HOTS assessment as a method for improving students' speaking skills and highlights the need for additional research in this area.

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