

Implementation of Project-Based Learning in Morphology Learning Assessment on Morphological and Morphophonemic Process Materials

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ABSTRACT

Morphology learning in higher education is important to improve students' understanding in determining words and correct word formation. This study aims to describe the application of Project-based learning in morphology learning, material on morphological and morphophonemic processes in texts. The method used is descriptive qualitative which combines classroom observation methods and document analysis of learning outcomes. The research participants were 15 students from the Indonesian Language Education Study Program, Universitas PGRI Adi Buana Surabaya, class of 2024, selected through a purposive sampling method. The project type was to identify morphological and morphophonemic processes in texts. The assessment used was a scored process assessment with criteria. The results of the study indicate that student learning outcomes using Project-Based Learning (PjBL) are successful, this can be seen in the student's score. The use of Project-Based Learning is effective in this learning because students will contribute to each other in analyzing texts that undergo morphological and morphophonemic processes. Based on these findings, it can be suggested that the use of Project-Based Learning is effective but does not rule out the possibility of using more diverse, interactive, and fun methods. The results of this study provide an important contribution in improving learning outcomes using Project-Based Learning (PjBL).

Keywords: *Project based learning, Assessment, Morphology, Morphological and Morphophonemic Processes, Students*

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INTRODUCTION

Indonesian language education, particularly morphology courses, plays a crucial role in providing students with an understanding of the structure and formation of words in Indonesian. One aspect discussed in morphology is morphological and morphophonemic processes, which encompass the methods of word formation and the phoneme changes that occur during word formation. These processes are essential elements in learning grammar, not only honing students' linguistic skills but also enriching their analytical skills regarding linguistic phenomena. However, despite the significance of this topic, many students struggle to grasp these concepts due to their complex and abstract nature (Siregar, 2017).

To address these challenges, more relevant and applicable learning methods are needed. One method that can be implemented is Project-Based Learning (PjBL), which focuses on learning through projects that provide students with hands-on experience. PjBL can increase student participation in the learning process while helping them connect morphological theory with everyday practice. The implementation of PBL in morphology courses is expected to support students in not only understanding morphological concepts theoretically but also applying them in broader, more practical contexts (Thomas, 2000).

Morphology learning in Indonesian language classes is still dominated by conventional methods that focus on practice exercises, thus failing to stimulate students' in-depth analytical skills. Meanwhile, research on Project-Based Learning (PjBL) has demonstrated its effectiveness in improving critical thinking skills, but its specific application to morphological and morphophonemic processes remains minimally explored. Furthermore, most previous studies have focused solely on the application of PjBL as a learning model, not as a basis for developing authentic project assessments that are appropriate to the characteristics of linguistic material. While project-based assessment has significant potential for comprehensively measuring morphemic and morphophonemic analysis skills, it has not been widely studied in the context of morphology learning. Therefore, this research is crucial to fill this gap by implementing PjBL integrated with authentic assessments in morphology learning.

Several studies have shown that PBL methods can improve students' understanding and skills in various areas, including language. For example, in a language learning environment, PBL helps students hone their critical and analytical thinking skills and encourages them to collaborate in solving complex problems. The use of PBL in the topic of morphological and morphophonemic processes allows students to be more engaged in learning activities, recognize real-world problems related to language, and formulate solutions based on theoretical understanding (Harris, 2014). Thus, the use of PBL in morphology learning is an appropriate step to improve the quality of education and students' understanding of the material presented.

Several previous studies have shown that Project-Based Learning (PjBL) has a positive impact on the quality of learning in various fields, including language learning. For example, a study conducted by Savery found that Project-Based Learning (PjBL) can improve students' critical and analytical thinking skills in understanding language concepts (Savery, 2006). The implementation of Project-Based Learning (PjBL) in morphology and morphophonemics is expected to have a positive effect by deepening students' understanding of morphological aspects previously considered difficult. By emphasizing learning through appropriate projects related to real life, students not only learn theory but also apply and analyze morphological and morphophonemic processes in greater depth and in practice. Therefore, the application of project-based learning in teaching morphology can be an effective alternative to improve the quality of student learning and understanding.

Previous research on the implementation of the project-based learning model has successfully improved student learning outcomes, with average scores above the Minimum Competency (KKM) of 90, increased student activity, and improved group collaboration. Teachers also make improvements in the learning process, ensuring all teacher activities run smoothly and students are more engaged in learning (Nurhidayah & Indrayanti, 2025). Selecting the right learning model and using engaging media are crucial for improving student motivation and learning outcomes. Furthermore, ongoing reflection and evaluation are essential in the learning process.

Previous research related to assessment by (Yenni et al., 2025) showed that the TEACCH model is effective in improving joint attention skills in early childhood autistic children at the River Kids Autism Special Needs School in Malang. The implementation of TEACCH, which includes physical structures, visual schedules, and individual work systems, was proven to be highly structured and had a statistically significant positive impact on the children's joint attention skills. The results of the study provide evidence supporting the effectiveness of TEACCH, but still need to strengthen the methodology and long-term evaluation for more comprehensive validity. This study is used as a basis for future research.

Further research on the assessment of an in-depth case study approach to evaluate the quality of Indonesian language learning in higher education (Zainudin et al., 2025). This study identified strengths and weaknesses in the learning process, from the curriculum and teaching materials to the teaching methods used by lecturers. This approach allowed researchers to explore the phenomenon comprehensively and provide applicable recommendations for improvement, including the use of assessment rubrics and examples of scientific articles as a

Implementation of Project-Based Learning in Morphology Learning Assessment on Morphological and Morphophonemic Process Materials guide for students in developing academic and professional communication skills. The research was used as a reference in developing an assessment rubric for the current study.

Previous research on the third assessor highlighted the importance of actively implementing formative assessment to improve students' self-regulated learning (SRL), particularly in the context of Islamic boarding schools (pesantren) with religious values (Anisa et al., 2025). This study emphasized that formative assessment serves not only as a measurement tool but also as a strategy that supports continuous learning by providing feedback that encourages reflection and adjustment of students' learning strategies. Furthermore, this study fills a gap in the literature with a contextual approach that adapts formative assessment to the Islamic boarding school environment, a previously understudied area of general education research. The results of this study serve as a reference in developing assessments for learning.

Traditional learning methods are inadequate because they focus solely on lectures and routine exercises, thus not providing students with the opportunity to explore language data in depth or apply morphological and morphophonemic concepts in real-world contexts. Furthermore, conventional approaches tend to result in rote understanding, rather than the analytical skills needed to comprehensively analyze word structure and sound changes. Project-Based Learning (PjBL) is suitable for morphology learning because this model allows students to analyze morphological and morphophonemic processes through authentic projects that require hands-on data collection, morphemic segmentation, and sound change analysis. Furthermore, PjBL encourages students to apply linguistic concepts contextually, thus fostering a deeper and more meaningful understanding of word structure and morphophonemic phenomena.

Understanding morphological and morphophonemic processes is a crucial core competency in Indonesian language studies, as it determines students' ability to scientifically analyze word forms and sound changes. However, the abstract and analytical nature of the material often presents difficulties for students when taught solely through conventional lecture and practice methods. Project-Based Learning (PjBL) provides students with opportunities to explore morphological and morphophonemic processes more concretely through authentic projects that require data collection, morphemic analysis, and the application of morphophonemic rules in real-world contexts. Therefore, the application of PjBL to this material needs to be researched to ensure its effectiveness in enhancing students' conceptual understanding and analytical abilities more deeply.

Considering the importance of a deep understanding of morphological and morphophonemic processes in Indonesian, as well as the benefits gained from implementing project-based learning, this study aims to examine the effectiveness of Project-Based Learning in assessing learning in morphology courses. This study will discuss how Project-Based Learning can support students in understanding this complex material and also improve students' analytical and application skills in studying morphological and morphophonemic processes. *Subheading*

METHOD

This study used a qualitative descriptive method to evaluate the implementation of Project Based Learning (PjBL) in teaching morphology, particularly regarding the material on morphological and morphophonemic processes. The choice of a qualitative descriptive method is considered appropriate because it can explore and explain the phenomena that arise in the learning process, as well as understand students' views on the application of PBL in the context of teaching morphology. A qualitative approach can provide a more comprehensive and in-depth understanding of experiences, perspectives, and processes occurring in the field (Creswell, 2014). This study aims to investigate students' experiences when learning using project-based learning (PBL) methods and to identify the obstacles and challenges they encounter.

The research data sources were students of the Indonesian Language Education Study Program, Universitas PGRI Adi Buana Surabaya, class of 2024 A (collected using a purposive sampling method) consisting of 15 students. The researcher selected students who had participated in morphology learning with the PjBL approach because they were considered to have direct experience in the teaching and learning process. The purposive sampling method is effectively used when researchers want to select informants who have certain knowledge or experience relevant to the research topic (Sugiyono, 2017) .

Information collection was conducted through observation and documentation of project results and student performance as a form of learning activity by applying the PjBL approach. This is in line with the approach outlined by Miles, Huberman, and Saldana which highlights the importance of implementing various data collection methods to obtain more valid and reliable results in qualitative research (Miles, MB, Huberman, AM, & Saldana, 2014) . The collected data were then analyzed to identify the effectiveness of PjBL in improving students' understanding of morphology material, especially morphological and morphophonemic process material, as well as identifying obstacles and solutions that can be applied in the future implementation of PjBL.

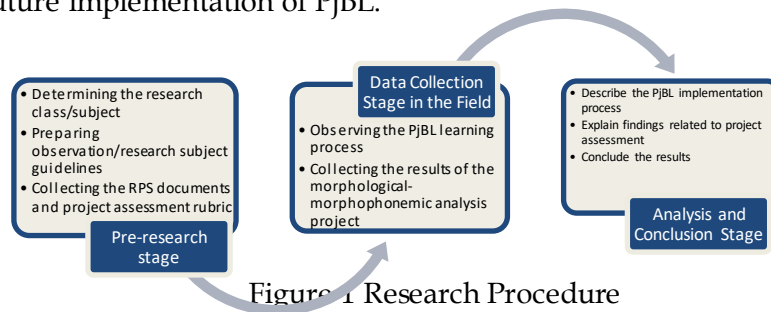


Figure 1 Research Procedure

The PjBL implementation was conducted in four meetings, divided into independent activities and presentations. In the previous meeting, guidance and technical aspects of the project were provided. The texts analyzed were nonfiction (newspaper articles) and fiction (short stories). The texts were selected through a lottery using a spin method. Learning success was measured using the assessment rubric in Table 2.

Next, below we will describe the syntax in learning the material on morphological processes and morphophonemic processes.

Table 1 BI Morphology Course Learning Syntax

No	Learning model	Per t	Learning methods	Syntax		Evaluation
				Lecturer Activities	Student Activities	
1	Participatory activities <i>Project-based learning</i>	12	1. Participatory lecture 2. Discussion 3. Question and answer	<ul style="list-style-type: none"> The lecturer opened the lesson with a greeting cheering "Good Morning Spirit" The lecturer told the students to study independently on the Virlenda LMS. The lecturer reviews the students' work and provides reinforcement regarding the composition in BI. The lecturer delivers project 	<p>(Learning organization/C2)</p> <ul style="list-style-type: none"> Students listen to the material in the Virlenda LMS Students find examples of composition forms in BI (Exercise 3) The work results are collected Students accompanied by lecturers form random groups (counting) for the project meeting 13 to 15 Odd groups analyze short story texts, even 	<i>Analytical (cognitive) exercises</i>

				<ul style="list-style-type: none"> • Lecturer delivers mini research analysis project guide • The lecturer conveys the project timeline and assessment system. • Lecturers and students conduct team draws 	<ul style="list-style-type: none"> • Students in their groups discuss the project that will be implemented. • Students look for short story texts and newspapers to analyze. • Students begin to compile and draft analyses outside of class. <p>(Problem Orientation/C2)</p>	
2	Small group discussion Project-based learning	13	Team discussion		<p>(Group-Based Learning/C2)</p> <ul style="list-style-type: none"> • Students work in groups to solve problems, which allows them to learn from each other and develop collaboration skills. <p>(C3 Information Search and investigation/C4)</p> <ul style="list-style-type: none"> • Students and their teams search for information and analyze the texts obtained by finding morphological and morphophonemic processes in the text. <p>(Solution Development/C4)</p> <ul style="list-style-type: none"> • Students develop solutions to given problems, involving critical thinking, analysis, and creativity. <p>(Compiling an Analytical Paper/C6)</p>	
3-4	Project-based learning	14-15	Presentation and Evaluation	<ul style="list-style-type: none"> • Lecturers provide input and evaluation of project results and problem-solving processes which are also important to 	<p>(Presentation and Evaluation C5)</p> <ul style="list-style-type: none"> • Students present project results to the entire class to practice communication and presentation skills. 	<p>presentation of the results of the analysis of morphological and morphophonemic processes in the text</p>

- improve further learning.
- The lecturer provides reinforcement of morphological and morphophonemic analysis in newspapers
 - Students ask each other questions about the newspaper team's performance and analysis results.
 - Students note down input and suggestions from other groups and lecturers.
 - Students revise their notes to be corrected and collected during the final exam.

Below we will describe the assessment used to provide an assessment of the presentation of the results of the analysis of morphological and morphophonemic processes in the text (Djumingin, 2017). (Rahman & Nasryah, 2019).

Table 2 Presentation Assessment on Morphological and Morphophonemic Process Analysis in Text

Rated aspect	Assessment Description	Score (1-5)
Clarity of Goals and Objectives	The presentation should clearly explain the purpose of the morphological and morphophonemic analysis and how this contributes to the understanding of the text. The purpose of the analysis should be easily understood.	
Understanding Morphological and Morphophonemic Theory	To what extent do students explain the basic theories used in the analysis, such as the concepts of morphology, morphophonemics, and the application of the theory in the text being analyzed.	
Methodology Used	Did the student clearly explain the methods used to analyze morphological and morphophonemic processes in the text? An explanation of the analytical techniques and approaches used.	
Relation to the Analyzed Text	To what extent are the analytical results presented relevant and directly related to the text being analyzed? Are the morphological and morphophonemic analyses explained with clear examples?	
In-depth and Critical Analysis	Are students able to conduct in-depth and critical analysis of morphological and morphophonemic processes in the text? Assessment of the quality and depth of the analysis provided.	
Visual Usage and Examples	To what extent does the student use visuals or examples to clarify points made in the presentation? Are the examples provided sufficient to support the analysis?	
Audience Engagement	Did the student attempt to engage the audience in an engaging way, such as through discussion or open-ended questions? To what extent was the audience engaged in the presentation?	
Mastery of Material	To what extent do students master the material presented and are able to explain and answer questions asked well.	
Presentation Organization and Flow	Is the presentation systematic and structured? Does it have a clear introduction, in-depth discussion of the main points, and an adequate conclusion?	
Professional Appearance and Attitude	Students' professional appearance and attitude during presentations, including body language, voice intonation, and politeness in answering questions.	

FINDINGS AND DISCUSSION

Findings' Data Analysis

From the results of the research conducted, it was found that in the morphology course learning material on morphological and morphophonemic processes in texts for students of the Indonesian Language Education Study Program, Universitas PGRI Adi Buana Surabaya with the implementation of PjBL began at meetings 12 to 15 (Table 1). At meeting 12, students were given a general overview of the project to be carried out, which also served as the

Implementation of Project-Based Learning in Morphology Learning Assessment on Morphological and Morphophonemic Process Materials problem orientation stage. In this stage, the lecturer also conveyed conveying the project's duration and assessment system. In addition, the lecturer also guided students in drawing team members.

The material on morphological and morphophonemic processes is very important material in the morphology course (Siregar, 2017) . This is in accordance with the Course Learning Outcomes (CPMK 5) which states that students are able to identify, apply the concepts of morphological theory and morphophonemic theory, and prove errors in word formation used in the text.

The implementation of PjBL is also important in the learning process of this material. As is known, PjBL can improve student learning outcomes (Nurhidayah & Indrayanti, 2025) . PjBL provides opportunities for students to be directly involved in projects relevant to real life, which makes them more motivated and enthusiastic in learning. In line with (Harris, 2014), students often work in groups to complete their projects, which allows them to learn how to collaborate with others, divide tasks, and respect the opinions of others.

To improve students' productive skills, particularly in writing, applying, analyzing, and speaking, the lecturer organized the class by dividing students into groups based on the texts they received. Each group received two core assignments: a presentation and a mini-analytical paper, designed to simultaneously hone their oral and written communication skills. The emphasis on these two productive skills aligns with learning theory, which states that structured speaking and writing practice can improve students' understanding of the material being studied and strengthen their ability to express ideas effectively (Saleh, 2024) .

Learning through group presentations provides students with the opportunity to improve their speaking skills in a scientific setting, while writing mini-analytical papers provides them with the space to express their ideas in a structured and planned manner, adhering to proper academic writing guidelines. Furthermore, it enables students to implement and integrate spiritual and social attitudes (Khuzaemah et al., 2024) .

By using detailed guidelines and relevant writing examples, learning can be more systematic and focused, so that students can create good mini-analysis papers. The following will describe the student scores. The four teams have completed the task by submitting (1) slides containing the analysis results, (2) mini-analysis papers, and (3) presentations (demonstrations of the results). The following is an example of a slide submission by the team.



Figure 2 Slideshow of the Results of the Morphological and Morphophonemic Process Analysis Project

Below is an example of a collection of project analysis results papers by the team.



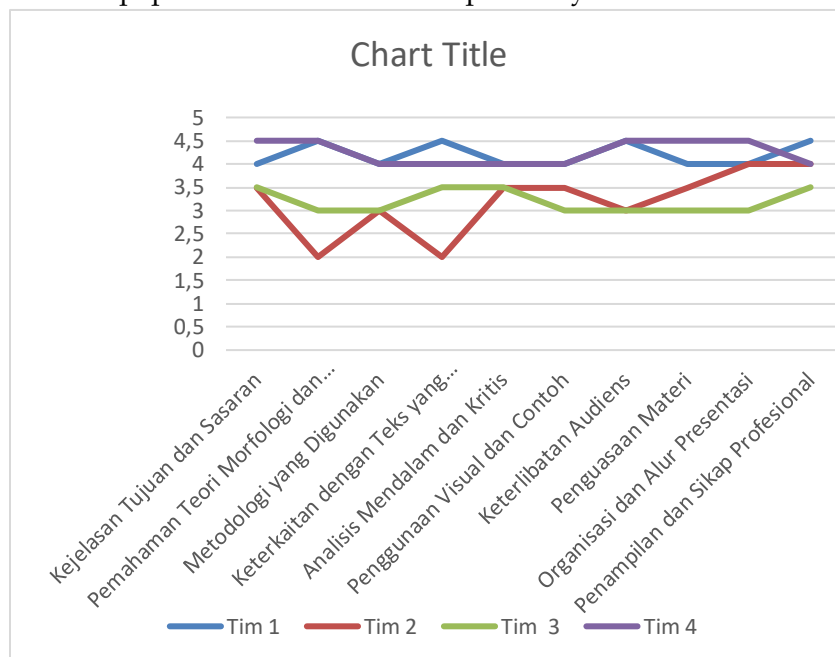
Figure 3 Paper on the Results of the Morphological and Morphophonemic Process Analysis Project

Implementation of Project-Based Learning in Morphology Learning Assessment on Morphological and Morphophonemic Process Materials
And below is the presentation (performance) of the results of the analysis project by the team.



Figure 4 Presentation of the Results of the Morphological and Morphophonemic Process Analysis Project

Next, below will be described the results of the project assessment in the form of presentations and papers that have been completed by the four teams.



Discussion

Based on Figure 2, it can be seen that the four teams (1, 2, 3, and 4) have completed their assignments by presenting and submitting their mini-analysis papers within the specified time. The presentation assignments, which were submitted in slide form, contained the analysis results, while the mini-analysis writing assignments were in the form of papers according to the systematics provided by the lecturer. Overall, each team has completed their assignments well. However, there are several evaluations that need improvement for the future.

The evaluation results of the presentation and mini-analysis paper assignments compiled by students showed significant differences. Figure 4 above shows, on the one hand, a team that excelled in both presentations and mini-analysis papers. During the presentation process, they were also proactive in class discussions, even prompting other participants to ask questions. This participation not only had positive value but also enhanced students' confidence in their work and enabled them to share their ideas with others. This finding clearly enhances the strength of meaning gained by students and will retain it for longer (Zainudin et al., 2025). Students' active participation in class discussions also enhances their critical thinking skills (Fatimah & Nuryaningsih, 2018).

On the other hand, teams were still found to be inactive. Students appeared reluctant to take an active role, asking questions, and responding in discussions. This presents a challenge for lecturers, as students are not fully willing to participate, likely due to lack of

Implementation of Project-Based Learning in Morphology Learning Assessment on Morphological and Morphophonemic Process Materials understanding of the material or lack of confidence in expressing their opinions. Lecturers must engage with students personally and provide opportunities to express their opinions in small, limited discussions. Lecturers must be able to provide constructive feedback or implement more interactive learning methods to encourage students' courage to speak up (Khuzaemah et al., 2024).

The implementation of PjBL in this learning process has been successful, but lecturers still have a responsibility to use more diverse methods. As can be seen from the scores obtained by each team, one team still scored the lowest compared to the other three. This aligns with what Siregar stated, Learning about morphological processes, such as affixation (adding prefixes, suffixes, etc.) and other processes (composition, conversion, reduplication), helps expand vocabulary and develop the ability to use language appropriately (Siregar, 2017).

In general, the results of the study indicate that the application of Project-Based Learning is able to build students' understanding of morphological and morphophonemic processes through constructivist analysis activities, where students construct their own knowledge through exploration of language data. These findings are also in line with collaborative learning theory because the project encourages collaboration between students in interpreting word structures and formulating morphophonemic patterns. Thus, the results of this study confirm that Project-Based Learning (PjBL) is a relevant and theoretical-empirical approach in accordance with the characteristics of morphological learning as reflected in the research title.

CONCLUSIONS

The findings in the previous chapter indicate that the application of PjBL in learning Morphology, particularly morphological and morphophonemic processes, significantly improves students' analytical and problem-solving skills. Student work also demonstrates excellent quality. However, to maintain diversity and the attractiveness of learning, the use of alternative methods is still recommended. Furthermore, lecturers' managerial skills, including classroom management skills and the diversification of teaching media, need to be continuously improved to optimize the teaching and learning process. The limitations of this study are that the number of participants is still too small, it is hoped that further research can be expanded and conducted in other language classes and courses.

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