

Implementing Project-Based Learning Model (PjBL) to Develop Students' Writing Skills in Composing Academic Texts

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ABSTRACT

This study aimed at enhancing students' ability to compose academic writing by implementing the Project-Based Learning (PjBL) model. The urgency of this research arises from the challenges faced by the students in academic proposal writing, often perceived as a major barrier in completing their education. The research method used is Classroom Action Research (CAR), divided into two cycles with stages of planning, implementation, observation, and reflection. The research subject comprises 22 seventh-semester students in the research proposal writing course at Institut Pendidikan Nusantara Global. The collected data through observation, interviews, and tests were then analyzed using descriptive qualitative methods. The result of the study indicated a significant improvement in proposal writing skills. In the pre-cycle stage, 36% of the 22 students were in the "sufficient" category. After implementing the PjBL method in cycle I, there was an improvement with 43% of students in the "good" category and 21% in the "very good" category. In Cycle II, results improved further: 50% of students were in the "good" category and 36% in the "very good" category, while the "sufficient" category dropped to 14%, with none in the "poor" category. This research shows that PjBL was effective in improving proposal writing skills, engaging students in critical and creative thinking, and strengthening written communication.

Keywords: project-based learning; academic writing; classroom action research

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INTRODUCTION

With the advancement of technology and information, writing skills have become increasingly essential for students (Alhojailan, 2021; Suci et al., 2021), as these abilities are fundamentally required for completing assignments given by lecturers or teachers. Furthermore, as a critical skill that every student needs to master (Yulandari et al., 2023; Wahidah, 2023), writing ability proves valuable in addressing challenges in academic writing, often seen as a benchmark of student competence. However, the process of teaching and learning to write is not always straightforward

(Randolph & Ruppert, 2020). Students often struggle to convey their thoughts effectively in written form.

Writing competence, however, goes beyond merely fulfilling academic assignments; it is a fundamental component for articulating thoughts with precision and efficacy across various academic fields. Empirical investigations conducted by Finkenstaedt-Quinn et al (2023) and Winberg et al (2023) demonstrate that proficient writing skills are essential for effective communication, thus empowering students to engage constructively in academic discourse and problem-solving initiatives. Furthermore, given that academic writing is recognized as a multifaceted cognitive endeavor, students often encounter significant obstacles when attempting to produce structured and coherent texts (Arochman et al., 2024; Andheska et al., 2023). Such challenges arise not only from the technical aspects of writing but also from the cognitive demands associated with organizing concepts, synthesizing sources, and formulating convincing arguments. Additionally, as Sun & Chan (2024) explain, students frequently face psychological barriers, including anxiety and self-doubt, which can substantially hinder their writing development.

Considering these challenges, the adoption of effective pedagogical methodologies is crucial for enhancing students' writing competencies. As demonstrated by Zhang et al (2019), incorporating formative feedback and facilitating collaborative writing exercises within the curriculum can significantly improve students' ability to effectively articulate their ideas. As emphasized by Kennedy (2023), instructional strategies that prioritize iterative writing and reflective practice can help students build confidence and refine their writing process, enabling them to overcome obstacles and achieve higher levels of writing competence. Consequently, educators must embrace diverse and varied approaches that encompass technical proficiency and cognitive strategies to effectively assist students in pursuing proficient writing skills.

Additionally, the capacity to compose a research proposal emerges as a critical skill that students must acquire in the academic field (Lo & Jim, 2022; Akbar, 2020). A research proposal, which serves as a blueprint for the entire research endeavor, requires students not only to master writing techniques but also to possess the ability to articulate research problems, objectives, and methodologies related to the subject matter being investigated (Saeed et al, 2021). This is because the scientific proposal is one of the key factors that determines whether students are eligible to advance to the next stage. Recognizing its importance, students are required to compose their proposals in a structured manner so that their objectives are conceptualized (Roderick, 2019). Therefore, to meet these criteria, students' writing skills need to be improved so that their objectives can be understood by the readers, in this case, the lecturers.

Students as prospective researchers need to have adequate competencies in drafting research proposals so that their ideas can be conveyed clearly and accurately. They must also be able to convince readers that the scientific proposal submitted has a strong and valid foundation (Yamin & Purwati, 2020). A research proposal serves as an initial framework that will determine the direction and validity of the research to be conducted. Therefore, a good proposal is not merely a collection of ideas but also a formal document that must meet certain standards, such as the

feasibility of the research theme, clarity of problem formulation, and the appropriateness of the methodology to be applied (Vasanthakumari, 2021; Mali, 2023).

The issue is also encountered by students at the Institut Pendidikan Nusantara Global who are preparing their research proposals. From the researcher's experience as a lecturer and through mentoring research proposals, it has been observed that students often become confused when asked about the substance of their proposals. Some rarely attend mentoring sessions, stating that writing a research proposal is a tiring activity. They tend to become easily bored and frequently encounter obstacles when attempting to articulate their ideas, which leads to a lack of motivation to complete their writing.

To address the challenges of student engagement and to mitigate the monotony of traditional learning activities above, educators should adopt dynamic instructional models such as Project-Based Learning (PjBL). PjBL is a student-centered learning approach (Tuan, 2021) that emphasizes active student participation, enabling learners to develop their skills through structured guidance on complex projects. This method necessitates collaborative effort, critical thinking, and problem-solving, ultimately culminating in a tangible final product (Hasanah et al., 2023). Furthermore, PjBL contributes to creating a diversified learning environment and offers students practical experiences by engaging them in projects directly related to relevant issues, fostering independence and active involvement (Al-Busaidi & Al-Syeabi, 2021). This approach not only enhances critical thinking, collaboration, and a sense of responsibility (Alotaibi, 2020) but also serves as a purposeful pedagogical strategy. The objectives of this study are to advance students' abilities in writing research proposals through the implementation of the PjBL model and to cultivate students' creativity and critical thinking skills in addressing and solving problems.

PjBL (Project-Based Learning) is developed based on several principles and theories, namely cognitive learning theory, social learning, and inquiry-based learning. By linking these principles, researchers believe that prior experiences contribute to learning because students are engaged in authentic learning situations, specifically "learning" by "doing" (Manao, 2024). Therefore, PjBL can provide tangible benefits for students, enabling them to develop their skills both inside and outside the learning environment.

With its various advantages, Project-Based Learning (PjBL) has been widely studied and applied by academics across diverse fields and educational levels, especially to enhance writing skills. For example, Manao et al. (2024) showed that implementing PjBL effectively improved high school students' narrative writing skills, while Hakimah (2023) found that PjBL helped middle school students enhance their procedural text writing skills. Additionally, research by Alemneh and Gebrie (2024) demonstrated that PjBL improved writing skills among Amharic-speaking students at the middle school level. Based on those previous studies, it can be concluded that previous research samples focused on middle and high school students, while recent studies involve university students. Furthermore, prior studies have mostly highlighted improvements in narrative, procedural, and sub-writing skills, whereas recent research places greater emphasis on enhancing writing skills in the context of research proposal writing. Based on these insights, the

purpose of this research is to improve students' ability to write research proposals through the implementation of the project-based learning (PjBL) model, while also fostering their creativity and critical thinking skills in problem-solving. By focusing on research proposal writing, this study extends the application of PjBL to higher education contexts, aiming not only to enhance academic writing abilities but also to equip students with essential skills for analytical and innovative thinking.

METHOD

This research employed classroom action research (CAR). It is considered appropriate as classroom action research consists of actions carried out in the form of learning activities in the classroom (Azwar et al, 2024). This study involves 22 seventh-semester students as subjects. Data was collected using several techniques: observation, interviews, and tests. This study employs a Classroom Action Research (CAR) model comprising two cycles, with each cycle including four stages: planning, implementation, observation, and reflection. The data collection process in this study has been cautiously prepared to obtain a clear depiction of how the PjBL model influences the growth of the writing skills of students in composing academic texts. In all, systematic observation was conducted over six weeks, which covers the phases in the two-cycle Classroom Action Research (CAR) model. Each observation session, lasting about 45 minutes, focused on the documentation of the level of student engagement and participation, as well as specific writing activities of the students in the classroom. The interviews were conducted in Indonesian so that the students would feel comfortable while expressing their experiences, difficulties, and personal growth related to academic writing. Apart from these, partial assessments were made at the end of each cycle, specifically on the capability of the students to write coherent and structured academic texts. This iterative assessment approach served very well in providing additional input to refine PjBL activities for effective improvement in the academic writing skills of the students.

The collected data, both qualitative and quantitative, is analyzed to understand changes in students' skills in composing research proposals. Qualitative data from observations and interviews are described descriptively, while quantitative data from test results are analyzed using descriptive qualitative methods to calculate the average and categorize students. However, results from the interviews were ultimately not included in the Findings section, as they did not directly address the main research question and allowed a stronger focus on data that yielded more actionable insights. Similarly, periodic evaluations were excluded from the Findings section, given their formative role in adjusting classroom methods and activities throughout the research rather than providing conclusive outcomes aligned with the research objectives.

FINDINGS

Pre-Cycle

Before starting the cycle, the researcher conducted a learning session focused on proposal writing. In this session, the lecture and question-answer method were used to explain how to create a proposal under established guidelines, including how to express fractions as percentages when presenting data. After presenting the material, the session concluded by giving questions to the students and asking them to independently create their proposals as a practical exercise. The scores from the pre-cycle assessment were then used as a basis for identifying the students' initial skill levels, enabling appropriate group division for the subsequent learning stages. The following are the scores from the pre-cycle assessment.

TABLE 1. Students' Pre-Cycle Score

Scores	Categories	Pre-Cycle	
		Students	%
86-100	Very Good	3	14
71-85	Good	7	32
56-70	Average	8	36
41-55	Less	4	18
<40	Very Less	0	0
Total		22	100

The table showed that out of the 22 students assessed, the majority fall into the “Average” category with a score range of 56-70, totaling 8 students or approximately 36% of the overall group. This category indicates that students' performance at this initial stage is at a moderate level, demonstrating an adequate understanding, though not yet optimal. Furthermore, 7 students (32%) are in the “Good” category, scoring between 71-85, which reflects a better comprehension compared to the “Average” group. This suggests that nearly one-third of the students have a higher ability level, though not reaching the highest category.

In the “Very Good” category, with a score range of 86-100, only 3 students, or around 14% of the total, fall within this level. This shows that only a few students have achieved a very good understanding at this early stage. Meanwhile, 4 students (18%) are categorized as “Less” with scores between 41-55, indicating that some students are still struggling to grasp the material and may require further support to improve their abilities. There are no students in the “Very Less” category (scores below 40), suggesting that no student is facing extremely serious difficulties at this initial stage.

The pre-cycle results indicate that the class’s average performance is at a sufficient level, with most students in the “Average” and “Good” categories. Although there are no students with extremely low scores, this score distribution suggests there is room for improvement.

Cycle I

Based on the preliminary results, a first cycle classroom action was conducted on proposal writing instruction for students using the project-based learning method following some stages: First is the planning stage, students were introduced to the basic concepts of proposal writing through discussions and materials presented by the instructor. Students were then grouped and asked to design a project proposal that they would develop. In this planning phase, students identified problems, set project objectives, and outlined the steps for implementing the project to be organized in their proposal. Second is the action stage, where students begin implementing the proposal design, they had created through project-based learning activities. Working in groups, they prepared detailed project proposals according to the provided guidelines, including background, objectives, and methods. The instructor acted as a facilitator, providing guidance and feedback throughout the proposal preparation process. The entire process lasts within four weeks, after which students are given a test to compose their project to know their understanding. The following results are shown in Table 2.

TABLE 2. Students' Cycle I Score

Scores	Categories	Pre-Cycle	
		Students	%
86-100	Very Good	6	21
71-85	Good	12	43
56-70	Average	8	29
41-55	Less	2	7
<40	Very Less	0	0
Total		22	100

The table shows the distribution of student scores in the initial cycle, where students are grouped into five categories based on the range of scores obtained. In the highest category, “Very Good” (86-100), there are 6 students, representing 21% of the total students, indicating excellent performance. The “Good” category (71-85) has the largest number, with 12 students or 43%, showing that the majority of students achieved satisfactory and quite good results in this assessment. In the “Average” category (56-70), there are 8 students, or about 29%, suggesting that nearly one-third of students are at a moderate performance level. Only 2 students, or 7%, fall into the “Less” category (41-55), indicating that a few students face challenges in achieving higher scores. There are no students below 40, or in the “Very Less” category, showing that all students have achieved scores above the minimum threshold. Overall, these results depict that the majority of students perform well to very well, with a small portion at medium to low levels, and no students with very low results.

Cycle II

Based on the reflection results from Cycle I, improvements were implemented in Cycle II for teaching proposal writing to students using the project-based learning approach consisting of two main stages, planning and action. In the planning stage, students work collaboratively to design a research proposal by identifying key elements. This includes determining the specific problem they wish to investigate, setting clear objectives for their research, and outlining the steps needed to conduct the research effectively. This phase helps students organize their thoughts and structure the proposal to ensure a comprehensive plan that addresses the identified issues and achieves the research objectives. In the action stage, students began working in groups according to the planned steps. They then conducted preliminary background research which refers to the initial phase of gathering general information on a topic before diving into a detailed study or specific analysis on their chosen proposal topics, developed an outline, and composed each section of the proposal in depth. The following are the results after they complete the stages in Cycle II.

TABLE 3. Students' Cycle II Score

Scores	Categories	Pre-Cycle	
		Students	%
86-100	Very Good	8	36
71-85	Good	11	50
56-70	Average	3	14
41-55	Less	0	7
<40	Very Less	0	0
Total		22	100

In Table 3, the distribution of students' scores in Cycle II is presented based on assessment categories. Out of the 22 students who were subjects of the study, 8 students (36%) achieved the "Very Good" category with scores ranging from 86-100. Meanwhile, 11 students (50%) fell into the "Good" category with scores between 71-85, indicating that most students performed well. A total of 3 students (14%) were in the "Average" category with scores ranging from 56-70. No students received scores in the "Less" category (41-55) or the "Very Less" category (below 40), indicating that all students achieved satisfactory scores, with none falling below the established minimum standard.

DISCUSSION

Comparison Score of Each Cycle

The implementation of project-based learning in writing research proposals shows a significant increase in student scores from the pre-cycle to Cycle II. In the pre-cycle, student scores were

generally low due to an approach focused on theory without direct application. When Cycle I was implemented, students began to engage in group projects to draft proposals, enhancing their understanding of structure and logical writing. Further improvement was seen in Cycle II, where presentation simulations and self-evaluation encouraged students to be more confident and skilled in organizing and presenting their research ideas. This can be observed in the comparison of scores in the following table.

TABLE 4. The Comparison Scores of All Cycles

Scores	Categories	Pre-Cycle		Cycle I		Cycle II	
		Students	%	Students	%	Students	%
86-100	Very Good	3	14	6	21	8	36
71-85	Good	7	32	12	43	11	50
56-70	Average	8	36	8	29	3	14
41-55	Less	4	18	2	7	0	7
<40	Very Less	0	0	0	0	0	0

The data indicates a notable improvement in students' research proposal writing skills through the application of the project-based learning method across three stages: Pre-Cycle, Cycle I, and Cycle II. In the Pre-Cycle stage, the majority of students were categorized as Average, with 36% (8 students) falling into this level, followed by 32% (7 students) in the good category, and a smaller proportion, 14% (3 students), in the Very Good category. This initial distribution highlights that most students started with a moderate level of skill in research proposal writing.

In Cycle I, there was a significant increase in the Good and Very Good categories, indicating progress. Specifically, 43% (12 students) reached the good level, and the Very Good category grew to 21% (6 students), though 29% (8 students) remained in the Average category, and 7% (2 students) were categorized as Less. By Cycle II, the project-based learning approach showed even more effective results, with 50% (11 students) in the good category and 36% (8 students) reaching the Very Good category. Only 14% (3 students) were in the Average category, and just one student (7%) remained in the Less category, with no students below this level. This progression suggests that the project-based learning method was successful in developing students' research proposal writing skills, as evidenced by the increase in students achieving the Good and Very Good levels.

Based on the findings, this study aligns with the theory that Project-Based Learning (PjBL) is effective in improving students' writing skills. This model allows students to collaborate in completing complex tasks, encouraging them to think critically and creatively, and enhancing their written communication abilities (Hapsari et al., 2024). Furthermore, PjBL provides students with the space to express their ideas more deeply, contributing to an improvement in the quality of their academic writing (Susanta, 2020).

CONCLUSION

Based on the findings, the study indicates that the implementation of Project-Based Learning (PjBL) significantly enhances students' skills in writing research proposals. In the initial phase (Pre-Cycle), most students were in the "Average" category. However, with the application of PjBL in Cycle I and Cycle II, there was a clear improvement, particularly in Cycle II, where most students reached the "Good" and "Very Good" categories. These results suggest that PjBL is effective in helping students understand the structure and develop deeper writing skills through collaboration and practical application. It is recommended that PjBL be more widely implemented in learning, with a gradual increase in task difficulty, additional support for students who are still struggling, and the integration of self-assessment to encourage reflection and deeper understanding.

However, certain limitations impact the generalizability of these findings. The study involved only 22 students from a single institution, limiting the ability to apply these results to a broader population. Additionally, the short duration of the study captured only immediate improvements, leaving the long-term effects of PjBL unexplored. Since the focus was solely on research proposal writing, it remains uncertain if the positive outcomes observed would apply to other types of academic writing. Future studies should address these limitations by involving larger, more diverse student groups, extending the study duration, and exploring the impact of PjBL on various academic writing tasks to verify and expand upon these findings.

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