



Improving Students' Vocabulary through Problem-Based Learning Strategy in Topic of Analytical Exposition Text (A Classroom Action Research at XI Grade of SMA Negeri 3 Palu)

Komang Indah Sari¹, Hastini², Moh. Riswanto³

^{1,2,3} Universitas Tadulako, Palu, Sulawesi Tengah, Indonesia

E-mail: komangindahsarii@gmail.com¹, mohriswantospd90@guru.sma.belajar.id³

Article Info

Article history:

Received October 08, 2025

Revised October 12, 2025

Accepted October 16, 2025

Keywords:

Vocabulary Development,
Problem Based Learning,
Asking and Giving Opinion,
Classroom Action Research

ABSTRACT

This classroom action research aims to improve the vocabulary of eleventh-grade students at SMA Negeri 3 Palu through the use of Problem Based Learning in the topic of Analytical Exposition Text. This research employed a Classroom Action Research (CAR) method, conducted in two cycles. Each cycle consisted of the stages of planning, action, observation, and reflection. The subjects of the study were 33 students, with data collected through observation, tests (pre-test and post-test), and interviews. The results showed an improvement in students' vocabulary through the implementation of problem based learning strategy. In the first cycle, students showed limited vocabulary, which made it difficult for them to understand and use expressions related to asking and giving opinion in Analytical exposition. However, in the second cycle, there was a significant improvement in students' vocabulary mastery after applying problem based learning strategy. Students became more active, confident, and demonstrated a better understanding of vocabulary related to directions. This research recommends the use of problem based learning as an effective learning strategy to support the implementation of the Kurikulum Merdeka, which emphasizes team work and student-centered learning. By using problem based learning, students are expected to better master vocabulary, feel more motivated to learn, actively participate in class, and not feel hindered due to a lack of vocabulary.

This is an open access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



Article Info

Article history:

Received October 08, 2025

Revised October 12, 2025

Accepted October 16, 2025

Keywords:

Penguasaan Kosakata,
Pembelajaran Berbasis
Masalah, Meminta dan
Memberikan Pendapat,
Penelitian Tindakan Kelas

ABSTRACT

Penelitian tindakan kelas ini bertujuan untuk meningkatkan penguasaan kosakata siswa kelas XI di SMA Negeri 3 Palu melalui penerapan model Problem-Based Learning (PBL) pada topik Teks Eksposisi Analitis. Penelitian ini dilaksanakan dalam dua siklus, yang masing-masing terdiri dari tahap perencanaan, tindakan, observasi, dan refleksi. Subjek penelitian berjumlah 33 siswa, dan data dikumpulkan melalui observasi, tes (pre-test dan post-test), serta wawancara. Hasil penelitian menunjukkan bahwa penguasaan kosakata siswa meningkat secara signifikan setelah penerapan strategi PBL. Pada siklus pertama, siswa masih memiliki keterbatasan kosakata yang menyebabkan kesulitan dalam memahami dan menggunakan ungkapan-ungkapan yang berkaitan dengan kegiatan bertanya dan memberi pendapat. Namun, pada siklus kedua, siswa menjadi lebih aktif, percaya diri, dan menunjukkan pemahaman kosakata yang lebih baik. Penelitian ini merekomendasikan penggunaan model Problem-Based Learning sebagai strategi



pembelajaran yang efektif untuk mendukung Kurikulum Merdeka, karena dapat mendorong kerja sama dan pembelajaran yang berpusat pada siswa.

This is an open access article under the [CC BY-SA](#) license.



Corresponding Author:

Komang Indah Sari
Universitas Tadulako

E-mail: komangindahsarii@gmail.com

INTRODUCTION

English is one of the subjects that plays an important role in the Indonesian education system, especially at the senior high school (SMA) level. In English learning, vocabulary mastery is one of the fundamental components that determine students' success in acquiring language skills. Parinding, Arianti, and Asri (2024) emphasize that vocabulary is the most essential aspect students must master in learning English, because without sufficient vocabulary knowledge, the communication process will be hindered. Vocabulary serves as the main foundation for developing the four language skills — listening, speaking, reading, and writing. Learners with a wide range of vocabulary tend to better understand texts, express ideas both orally and in writing, and actively participate in communicative interactions. Conversely, limited vocabulary leads to difficulties in understanding information, constructing coherent sentences, and expressing ideas effectively. Therefore, vocabulary mastery is not only viewed as a linguistic aspect but also as the key factor in improving overall English language competence.

One of the important materials in grade XI of senior high school is the Analytical Exposition Text, a type of text

that aims to express opinions or arguments about a particular issue. This text requires critical thinking skills and a broad vocabulary, especially academic and argumentative vocabulary. However, based on preliminary observations at SMA Negeri 3 Palu, it was found that many students still experience difficulties in understanding and using vocabulary related to analytical exposition texts. Students tend to be passive, less participative in discussions, and unable to express their opinions effectively in English, either orally or in writing.

To address this problem, a strategy that can improve students' vocabulary mastery is needed. One strategy that aligns with the spirit of the Kurikulum Merdeka is Problem-Based Learning (PBL). Problem-Based Learning (PBL), conceived in the late 1970s, presents a student-centered approach that engages learners by challenging them to solve real-world problems (Senyah, 2024). This strategy focuses on real problem-solving as a medium for learning. In PBL, students are presented with a problem that requires them to think critically, seek information, discuss, and collaboratively develop solutions. Through this process, students naturally encounter and use new vocabulary



in meaningful contexts. By integrating real problems into the learning context, PBL not only enhances students' motivation but also facilitates the development of critical thinking and problem-solving skills (Tamuu, Otoluwa, & Mamu, 2023).

A similar study was conducted by Nathalia Parinding, Arin Arianti, and Atika Hernian Asri (2024) titled "*Improving Vocabulary Mastery on Descriptive Text through the Problem-Based Learning Model for Class VII A Students of SMPN 1 Mulia Puncak Jaya.*" The study showed that the Problem-Based Learning model significantly improved students' vocabulary mastery.

The aim of this research is to investigate the extent to which the implementation of the Problem-Based Learning strategy enhances students' vocabulary mastery in learning analytical exposition texts. Using a Classroom Action Research (CAR) approach conducted over two cycles, this study seeks to foster greater engagement, confidence, and motivation in learning English, which in turn will improve students' vocabulary mastery. The use of CAR can provide practical solutions to classroom problems and contribute to improving the quality of the teaching and learning process (Susanti et al., 2022).

METHOD

This study employs a Classroom Action Research (CAR) method developed based on the model proposed by Kemmis and McTaggart (1988) to investigate the improvement of students' English vocabulary mastery through the implementation of the *Problem-Based Learning (PBL)* model. The research consists of four systematic stages: planning, action, observation, and reflection. Each

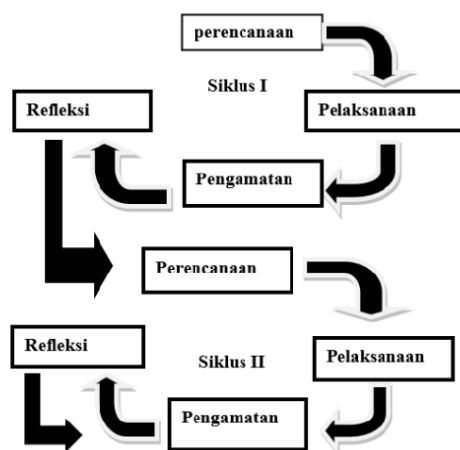
stage is carried out cyclically to identify learning problems, implement appropriate actions, observe the learning process, and reflect on the outcomes for further improvement. This model is widely applied in classroom action research as it provides a structured and reflective framework that enables teachers to continuously enhance the quality of teaching and learning in their classrooms (Widodo, 2020; Putra, 2019).

Research Design

This research was carried out through a series of action cycles, in which each cycle consisted of four stages: planning, implementation, observation, and reflection (Ritonga et al., 2023). Each cycle aimed to improve students' vocabulary mastery through the application of the *Problem-Based Learning (PBL)* model. The subsequent cycle was conducted if the results of the previous one had not yet met the predetermined success indicators (Hidayat, 2022). In this study, the researcher acted as an English teacher who was responsible for planning and implementing learning activities using the Problem-Based Learning model to enhance students' vocabulary mastery on the topic of *Analytical Exposition Text*.

Research Procedure

This study employed the Classroom Action Research (CAR) model by Kemmis and McTaggart (1988), consisting of four stages: planning, action, observation, and reflection. The research was conducted in two cycles.



1. Planning:

The researcher identified students' vocabulary problems in learning *Analytical Exposition Text* and designed lesson plans using the Problem-Based Learning (PBL) strategy. Teaching materials, observation sheets, and vocabulary tests were prepared.

2. Action:

The PBL strategy was implemented in class by presenting real-life issues related to *Analytical Exposition Text*. Students discussed problems, identified key vocabulary, and wrote arguments using the new words.

3. Observation:

The researcher and collaborator observed students' participation, engagement, and vocabulary use during lessons through observation sheets and field notes.

4. Reflection:

The researcher analyzed test results and observations to evaluate the effectiveness of PBL. If the results did not meet the success criteria, improvements were made for the next cycle.

Participant

The participants of this study were 33 eleven-grade students of SMA Negeri 3 Palu in the academic year 2024/2025. The participants were selected based on the observation that they encountered difficulties in vocabulary mastery, especially in the topic of Analytical Exposition.

Data Collection and Instruments Techniques

The data were collected through the following techniques:

a. Tests

1. Pre-Test.

The pre-test was administered prior to Cycle I to assess students' initial knowledge of vocabulary related to Analytical Exposition.

2. Post-test

Post-test were given after each cycle to evaluate vocabulary improvement following the use of problem based learning strategy. The test items included multiple-choice and short-answer questions, focused on vocabulary usage in the context of giving and asking opinion.

b. Observation

To monitor students' engagement and behavior during the learning process, observations were conducted throughout the teaching activities to document students' interest, participation, and responsiveness during lessons.

c. Interviews

To explore students' perceptions and responses toward the use of the mind mapping strategy, interviews were conducted to obtain insights into their



learning experiences and attitudes during the implementation process.

Data Analysis Techniques

Quantitative data obtained from the tests were analyzed using descriptive statistical methods by calculating the mean scores and comparing the results between the pre-test and post-test. In contrast, qualitative data derived from observations and interviews were analyzed through the processes of data reduction, data presentation, and conclusion drawing (Sugiyono, 2020).

Indicators Success Of Research

The success of this research was determined based on both qualitative and quantitative indicators that reflected a significant improvement in students' vocabulary mastery, as well as positive changes in their learning behavior and attitudes after the implementation of the *Problem-Based Learning (PBL)* model. Quantitatively, the success was observed through the increase in students' average vocabulary test scores before and after the application of PBL. Meanwhile, qualitatively, it was measured through the results of observations and interviews, which showed that students became more active, motivated, and enthusiastic in participating in the English learning process.

RESULT AND DISCUSSION

This research was conducted in two cycles, where each cycle consisted of the stages of planning, action, observation, and reflection. In each cycle, the researcher observed changes in students' vocabulary abilities based on the established indicators, namely: improvement in vocabulary

mastery, increased student engagement and participation, enhancement of confidence in using English, and positive responses from students toward learning through problem based learning.

Result of pre-test

The result of the pre-test was determined based on the criterion that the study was considered successful if at least 75% of the students achieved a score above the Minimum Mastery Criteria (MMC), which was set at 70 (Kemdikbudristek, 2022).

Students were given a pre-test to identify their initial ability in vocabulary mastery related to the topic of *Analytical Exposition*. The results of the pre-test revealed that only 10 out of 37 students achieved scores above the Minimum Mastery Criteria (MMC). This finding indicated that the students' vocabulary mastery was still considerably low, suggesting the need for an appropriate learning strategy to enhance their understanding and use of vocabulary in English learning.

Table 1. Pre-Test Results of XI C2 Grade Students at SMAN 3 Palu

No	Initial	Score Pre-Test	Description
1	ASA	60	Belum Tuntas
2	AHN	60	Belum Tuntas
3	AYL	55	Belum Tuntas
4	AED	50	Belum Tuntas
5	ADR	60	Belum Tuntas
6	AQR	60	Belum Tuntas
7	CFL	85	Tuntas
8	CLL	70	Tuntas
9	DAA	65	Belum Tuntas
10	DRK	60	Belum Tuntas
11	FEB	65	Belum Tuntas
12	GFL	65	Belum Tuntas
13	GAC	80	Tuntas
14	GFP	85	Tuntas
15	HNL	60	Belum Tuntas



16	IWA	60	Belum Tuntas
17	JHR	80	Tuntas
18	KAR	65	Belum Tuntas
19	MHR	70	Tuntas
20	MHA	75	Tuntas
21	MAF	80	Tuntas
22	MSS	65	Belum Tuntas
23	MSF	85	Tuntas
24	MIJ	60	Belum Tuntas
25	NLS	70	Tuntas
26	NKB	60	Belum Tuntas
27	NMF	60	Belum Tuntas
28	NRM	65	Belum Tuntas
29	NDP	65	Belum Tuntas
30	RMI	50	Belum Tuntas
31	RIN	60	Belum Tuntas
32	STM	60	Belum Tuntas
33	SLT	65	Belum Tuntas
34	STB	65	Belum Tuntas
35	VJY	65	Belum Tuntas
36	YDL	60	Belum Tuntas
37	PTJ	65	Belum Tuntas

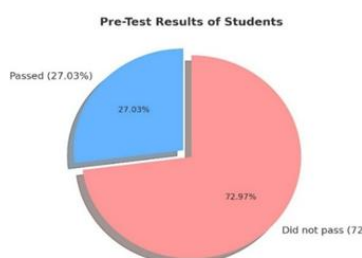
Description:

- KKM (Kriteria Ketuntasan Minimal): 70
- Number of students who passed: 10 students (27.03%)
- Number of students who did not pass: 27 students (72.97%)

The following is a pie chart illustrating the percentage of pre-test results of students:

- 27.08% of students passed
- 72.97% of students did not pass

Picture 1. Pre -Test Results of Students



The pie chart above presents the results of the students' pre-test on vocabulary mastery related to the *Analytical Exposition* topic. The data reveal that only 27.03% of the students achieved scores above the Minimum Mastery

Criteria (MMC) of 70, indicating that a small proportion of the class demonstrated sufficient vocabulary knowledge. In contrast, 72.97% of the students did not meet the required standard, showing that the majority still had difficulties in mastering vocabulary, particularly in understanding word meanings, collocations, and contextual usage in *Analytical Exposition* texts. These findings indicate that the students' initial ability in vocabulary mastery was relatively low. Such a condition suggests that conventional teaching methods might not have effectively supported students' engagement and understanding of new vocabulary.

1. Results of Cycle 1 Observations

In Cycle I, the *Problem-Based Learning (PBL)* strategy was introduced to enhance students' vocabulary mastery in the *Analytical Exposition* topic. After implementing the PBL approach, there was a noticeable improvement in students' performance. The results showed that **50%** of the students achieved scores above the Minimum Mastery Criteria (MMC), indicating an increase compared to the pre-test result, where only 27.03% of students had passed. This improvement suggests that the use of PBL helped students become more engaged and active during the learning process. They worked collaboratively in solving real-world problems, which encouraged them to explore new vocabulary in context. Although the result had not yet reached the target of 75% of students passing, the increase demonstrated a positive impact of PBL on students' vocabulary development and learning motivation.

1) Reflection of Cycle 1

The implementation of the *Problem-Based Learning (PBL)* strategy



in Cycle I showed positive progress in students' engagement and vocabulary mastery. Students became more active and motivated to learn new words through group discussions and problem-solving tasks. However, some students were still passive and had difficulty using new vocabulary accurately. Although the target of 75% mastery was not yet achieved with only 50% of students passing the results indicated improvement, and adjustments would be made in the next cycle to enhance participation and vocabulary practice.

2. Result of Post – Test Cycle II

The post test of cycle II was administered after revising and improving the teaching process based on the reflection of cycle I. The improvements included clearer problem instructions, more guided vocabulary exploration, and stronger teacher facilitation during group work. The results of the post – test in cycle II revealed a remarkable improvement. Out of 37 students, 31 students achieved scores above the minimum mastery criteria (MMC), reaching 83.78%. This shows that most students successfully mastered vocabulary related to analytical Exposition Text and applied it effectively arguments both orally and in writing.

Table 2. Post -Test of XI Grade students at SMAN 3 Palu

No	Initial	Score Post Test	Description
1	ASA	80	Tuntas
2	AHN	75	Tuntas
3	AYL	70	Tuntas
4	AED	70	Tuntas
5	ADR	75	Tuntas

6	AQR	75	Tuntas
7	CFL	90	Tuntas
8	CLL	80	Tuntas
9	DAA	70	Tuntas
10	DRK	75	Tuntas
11	FEB	80	Tuntas
12	GFL	80	Tuntas
13	GAC	90	Tuntas
14	GFP	90	Tuntas
15	HNL	70	Tuntas
16	IWA	70	Tuntas
17	JHR	85	Tuntas
18	KAR	75	Tuntas
19	MHR	80	Tuntas
20	MHA	85	Tuntas
21	MAF	85	Tuntas
22	MSS	70	Tuntas
23	MSF	90	Tuntas
24	MIJ	70	Tuntas
25	NLS	80	Tuntas
26	NKB	70	Tuntas
27	NMF	75	Tuntas
28	NRM	75	Tuntas
29	NDP	80	Tuntas
30	RMI	65	Belum Tuntas
31	RIN	65	Belum Tuntas
32	STM	70	Tuntas
33	SLT	70	Tuntas
34	STB	75	Tuntas
35	VJY	75	Tuntas
36	YDL	65	Belum Tuntas
37	PTJ	70	Tuntas

Description:

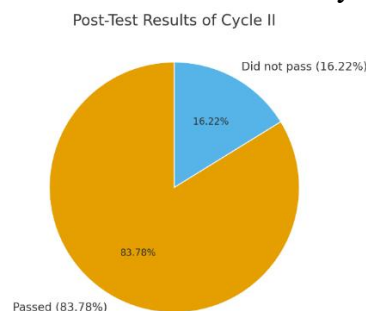
- KKM (Kriteria Ketuntasan Minimal): 70
- Number of students who passed: 31 students (83.78%)
- Number of students who did not pass: 6 students (16.22%)

The following is a pie chart illustrating the percentage of post-test results of Cycle II: 83.78% of students passed



16.22% of students did not pass

Picture 2. Post – Test Results of cycle II



The pie chart results show a significant improvement in students' vocabulary mastery compared to both the pre-test and Cycle I post-test. The percentage of students achieving mastery increased from 27.03% (pre-test) → 51.35% (Cycle I) → 83.78% (Cycle II). This steady progress demonstrates that the *Problem-Based Learning (PBL)* strategy effectively enhanced students' vocabulary acquisition and engagement in learning *Analytical Exposition Texts*.

1) Reflection of Cycle II

The implementation of the *Problem-Based Learning (PBL)* strategy in Cycle II demonstrated significant improvement in students' vocabulary mastery and overall classroom engagement. The adjustments made after Cycle I—such as clearer problem orientation, guided vocabulary lists, and structured group discussions—helped students participate more actively and confidently. During Cycle II, students were better able to identify key vocabulary from authentic problems, apply it correctly in argumentative writing, and use it fluently during discussions and presentations. Learners collaborated effectively within their groups, demonstrating higher levels of critical thinking and creativity when constructing arguments in the *Analytical Exposition Text*. The learning process also fostered a stronger sense of responsibility,

as students took ownership of their learning by researching and applying vocabulary in meaningful contexts.

Quantitatively, the post-test results revealed that 83.78% of students achieved scores above the Minimum Mastery Criteria (MMC), surpassing the target of 75%. This increase indicated that the PBL method was highly effective in improving students' vocabulary mastery and motivation. Qualitatively, observations and interviews showed that students were more enthusiastic, confident, and communicative in expressing their ideas using appropriate English vocabulary.

Overall, the reflection of Cycle II confirms that Problem-Based Learning not only improved students' vocabulary achievement but also cultivated essential 21st-century skills such as collaboration, problem-solving, and critical thinking. The success of Cycle II suggests that PBL can serve as an effective and sustainable approach for teaching vocabulary in the context of *Analytical Exposition Texts*.

CONCLUSION

The implementation of the *Problem-Based Learning (PBL)* strategy successfully improved students' vocabulary mastery in learning *Analytical Exposition Texts*. The students' achievement increased significantly from 27.03% in the pre-test to 83.78% in the post-test of Cycle II. PBL also enhanced students' engagement, confidence, and motivation in learning English. Therefore, PBL is proven to be an effective approach to *developing vocabulary* mastery and promoting active, student-centered learning.



Suggestion

Teachers are encouraged to apply the *Problem-Based Learning* strategy regularly to improve students' vocabulary and critical thinking skills. Future research may explore the use of PBL in other English language skills or text types to broaden its applicability and benefits in language teaching.

BIBLIOGRAPHY

- Barrows, H. S., & Tamblyn, R. M. (1980). *Problem-Based Learning: An Approach to Medical Education*. New York: Springer Publishing Company.
- Hidayat, R. (2022). Penggunaan model pembelajaran Kemmis dan McTaggart dalam PTK. *Jurnal Aksi Pedagogi*, 8(3), 56–68.
- Nation, I. S. P. (2013). *Learning Vocabulary in Another Language* (2nd ed.). Cambridge: Cambridge University Press.
- Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi. (2022). *Guidelines for Learning and Assessment*. Jakarta: Kemdikbudristek.
- Parinding, N., Arianti, A., & Asri, A. H. (2024). Peningkatan penguasaan kosa kata pada *descriptive text* melalui model *problem-based learning* kelas VII A SMPN 1 Mulia Puncak Jaya. *Blantika: Multidisciplinary Journal*, 2(6), 45–56. p-ISSN 2987-758X, e-ISSN 2985-4199.
- Richards, J. C., & Renandya, W. A. (Eds.). (2002). *Methodology in Language Teaching: An Anthology of Current Practice*. Cambridge University Press.
- Ritonga, M. R., Mesra, R., Pratiwi, S. H., Salem, V. E. T., Wahyu, L., Wahyuni, U., Khasanah, U., Tuerah, P. R., Korompis, M. E., & Putra, S. (2023). *Penelitian Tindakan Kelas*. PT. Mifandi Mandiri Digital. ISBN 978-623-09-3956-3.
- Savery, J. R. (2015). Overview of Problem-Based Learning: Definitions and Distinctions. *Interdisciplinary Journal of Problem-Based Learning*, 9(2), 1–15. <https://doi.org/10.7771/1541-5015.1559>
- Susanti,., Wijayanti, A., Ernawati, T., & Indahsari, R. N. (2022). *Pelatihan Penelitian Tindakan Kelas Bagi Guru Di masa Pandemi*. *Jurnal Abdi Insani*, 9(2), 598-606. <https://doi.org/10.29303/abdiinsani.v9i2.628>
- Tamuu, E. Z. P., Otoluwa, M. H., & Mamu, R. (2024). Improving student's vocabulary mastery by using problem-based learning in narrative text (*Meningkatkan penguasaan kosakata siswa dengan menggunakan pembelajaran berbasis masalah dalam teks naratif*). *Research Review: Jurnal Ilmiah Multidisiplin*, 3(2), 45–56. ISSN 2962-2743.