



**EnJourMe (English Journal of Merdeka):
Culture, Language, and Teaching of English**

Journal homepage: <http://jurnal.unmer.ac.id/index.php/enjourme/index>

The effect of flashcard-based vocabulary games on fourth-grade students' vocabulary understanding

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ARTICLE INFO

Received 31 October 2025

Accepted 12 December 2025

Available online 31 December 2025

Keywords:

Elementary students,
English vocabulary,
flashcards, pre-experimental
design,
vocabulary understanding

DOI:

[10.26905/enjourme.v10i2.1635](https://doi.org/10.26905/enjourme.v10i2.1635)

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ABSTRACT

One of the main challenges students face in learning English is limited vocabulary understanding, often due to insufficient learning materials and outdated instructional approaches. Flashcards are a visual tool that can support vocabulary learning through image–word associations. This study aimed to investigate the effect of flashcard-based vocabulary games on fourth-grade students' vocabulary understanding at a public elementary school in West Nusa Tenggara. Using a pre-experimental one-group pretest–posttest design, the study involved 20 students selected through purposive sampling. Data were collected through vocabulary tests, observation sheets, and student questionnaires. The vocabulary test assessed two components: spelling and meaning comprehension. Data analysis included normality and homogeneity tests, and a paired-samples t-test, using IBM SPSS Statistics 24. The results showed a significant improvement in students' vocabulary understanding after the implementation of flashcards. The mean pretest score increased from 59.25 to 82.00 in the posttest, and the number of students achieving mastery rose from 5 to 19. The paired-samples t-test yielded a p-value of 0.000 (< 0.05), indicating a statistically significant difference between pretest and posttest scores. These findings demonstrate that flashcard-based vocabulary games effectively enhance students' vocabulary understanding and can be used to support English learning in elementary school settings.

How to cite this article (APA Style): Lutfiani, L., Khusaini, F., Irawati, I. (2025). The effect of flashcard-based vocabulary games on fourth-grade students' vocabulary understanding. *EnJourMe (English Journal of Merdeka): Culture, Language, and Teaching of English*, 10(2), 189-201. <https://doi.org/10.26905/enjourme.v10i2.16351>

INTRODUCTION

English is a major international language used for communication across countries, and it plays an important role in education, employment, and technology. It also plays a dynamic role in many aspects of everyday life, with its influence extending to broader processes of learning and knowledge construction within academic contexts (Karmaker & Al Hasan, 2025). In the school context, English often functions as a medium for accessing information and building global competencies. Mastering English provides broader opportunities for learning and future careers (Rianti et al., 2024). Today, English is widely used in many aspects of daily life, including education, work, politics, and travel, making it essential to provide adequate English instruction for students (Saputra et al., 2020). Regular exposure to English also supports the development of language proficiency, and continuous engagement with new vocabulary contributes significantly to learners' vocabulary growth (Thariq et al., 2020; Zulaini et al., 2023).

Vocabulary is a fundamental indicator of English language ability. Learners who lack sufficient vocabulary often struggle to understand lessons, making learning English difficult and discouraging. Building on the importance of selecting effective learning media, it is also essential to recognize that vocabulary learning involves more than simply memorizing word lists. At the early stages of language development, students must first develop vocabulary understanding, which refers to the ability to recognize words and comprehend their basic meanings (Mohammadnejadet al., 2016). This foundational level of vocabulary knowledge supports learners' ability to follow classroom instructions, interpret simple texts, and engage in meaningful communication. Strengthening vocabulary understanding is especially crucial for young learners, as it lays the groundwork for more advanced vocabulary mastery and overall language proficiency. However, many students continue to struggle with this basic stage due to limited exposure, outdated materials, and instructional methods that do not adequately support word recognition or meaning making (Labanu et al., 2026; Le & Luong, 2023). Consequently, learning tools such as flashcards become particularly valuable because they offer visual cues that reinforce meaning and help students build the essential recognition skills needed for improved vocabulary understanding. Furthermore, mastery of academic vocabulary is essential for effective communication in educational settings. Students with strong academic vocabulary tend to achieve higher grades and are better able to express complex ideas in their

writing (Lee et al., 2021; Maamuujav, 2021).

Initial interviews and classroom observations conducted in September 2025 with English teachers at SDN 02 Rite reveal that, although English is offered as a local content subject to equip students with skills for their future needs, several challenges persist. Many students continue to struggle with comprehending word meanings and recognizing basic vocabulary items, indicating limited vocabulary understanding. This problem may be attributed to the continued use of outdated guidebooks, traditional teaching methods, and a lack of engaging learning media, which collectively reduce student motivation and classroom participation (Ilmah et al., 2026; Saputra, 2025). Consequently, learning outcomes remain low; among the 20 fourth-grade students, only 20% have met the school's English learning achievement criteria. These conditions highlight a critical gap in instructional practices, particularly in vocabulary learning. While vocabulary understanding serves as the foundation for students' ability to comprehend and participate in English lessons, vocabulary mastery requires more profound, more productive knowledge. Many students at SDN 02 Rite have not yet reached this stage due to limited exposure to varied learning materials and insufficient opportunities for meaningful practice. Recent studies emphasize that innovative and interactive media can significantly enhance young learners' vocabulary development by supporting both understanding and gradual mastery (Rahmah et al., 2025; Wulandari, 2025). Therefore, there is an urgent need to explore alternative approaches that are more engaging, contextually appropriate, and capable of addressing students' current learning limitations. This study is designed to respond to that need.

This underscores the need for teachers to select instructional materials and media that effectively support vocabulary learning. One practical and adaptable option is the use of language cards, or flashcards, which can be tailored to suit the topic being taught (Zulaini et al., 2023). To improve students' ability to understand new words, teachers need to employ effective teaching strategies supported by engaging learning media. Instructional media that stimulate interest and encourage active participation can make learning more enjoyable and meaningful for young learners. Games are particularly effective in this context because they are fun, interactive, and easy to follow, providing opportunities for two-way feedback and allowing students to apply their learning in authentic situations (Switri, 2022; Ilsanti & Anjarwati, 2025). This method is called gamification which refers to the integration of game-based features—such as points, badges, leaderboards, and rewards—into non-gaming environments, and it has increasingly been adopted in various domains, including language education. Previous studies indicate that gamified approaches are effective in enhancing learners' motivation, engagement, and learning outcomes across a range of

educational contexts (Saad & Yustisia, 2025). Among the various educational games available, picture card games, commonly known as flashcards, are widely recognized for their usefulness. Flashcards are small cards with images, words, or symbols that help students recall vocabulary through visual association. They are also beneficial for reinforcing spelling and word recognition (Arsyad, 2015). To maximize their effectiveness, flashcards should include clear and appropriately sized images and text (Muhammadnejad et al., 2016). Therefore, incorporating flashcard-based games has the potential to significantly enhance students' ability to remember and understand vocabulary, addressing the instructional limitations identified at SDN 02 Rite.

Previous studies consistently highlight the effectiveness of flashcards in supporting vocabulary learning. For instance, Zulaini et al., (2023) reported that the use of flashcards significantly improved English vocabulary among Grade 2 students at SDN Karawaci 5, while Syamsyiah & Ma'rifatullah (2023) found that flashcard-based games helped learners achieve higher levels of vocabulary mastery. However, most existing studies primarily focus on vocabulary mastery, which encompasses deeper aspects of vocabulary knowledge such as productive use, collocations, and multiple word meanings. In contrast, far fewer studies specifically examine vocabulary understanding, which refers to learners' ability to recognize words and comprehend their basic meanings. Research using flashcards seldom isolates comprehension as the main learning outcome, creating a gap in the literature. Additionally, no previous study has explored this issue within the context of SDN 02 Rite, where students' challenges with understanding basic vocabulary remain largely unaddressed.

METHOD

This study employed a quantitative approach using a pre-experimental research design. The selected design was the one-group pretest-posttest design, in which a single class served as the experimental group with no control group. This design was chosen because the research aimed to examine the effect of flashcard-based vocabulary games on students' vocabulary understanding, particularly in a classroom where only one intact group was available for implementation. The research procedure began with a pretest, followed by treatment using flashcards, and ended with a posttest to measure changes in students' vocabulary understanding.

The participants in this study were 20 fourth-grade students at SDN 02 Rite, Bima, West Nusa Tenggara, including 11 boys and 9 girls. The sample was selected through purposive sampling because this class was having difficulty with vocabulary, as observed during the school's preliminary observations. This class was therefore considered the best group to receive the intervention using flashcard-based learning activities.

Several tools were used to gather data: tests, a questionnaire, and observation sheets. The vocabulary test included 20 fill-in-the-blank questions aimed at assessing two aspects of vocabulary understanding: spelling and meaning comprehension. The student response questionnaire contained a series of statements to evaluate students' perceptions and attitudes toward using flashcards during the learning process. The observation sheet recorded classroom activities and student engagement during the implementation of flashcard-based vocabulary games. These instruments supported the study's goal of measuring not only learning outcomes but also students' involvement and reactions to the media. The questionnaire used a five-point Likert scale with the following scoring categories: strongly agree (5), agree (4), fair (3), disagree (2), and strongly disagree (1) (Putra, 2018). The results of the questionnaire were analyzed using the formula: $P = (f / N) \times 100$, where P represents the percentage score, f is the total score obtained, and N is the maximum possible score.

To assess the effectiveness of flashcard-based games on students' vocabulary skills, several statistical tests were performed using IBM SPSS Statistics 24. The data analysis included a normality test to check if the data followed a normal distribution, a homogeneity test to verify equal variances, and a paired-sample t-test to compare pretest and posttest scores. These analyses aimed to determine whether using flashcards led to a statistically significant improvement in students' vocabulary understanding.

RESULTS AND DISCUSSION

Results

This study examined the impact of using flashcards on students' vocabulary understanding at SDN 02 Rite. The research involved all 20 fourth-grade students, who served as the experimental group in a one-group pretest–posttest design. Data were gathered through vocabulary tests, student questionnaires, and classroom observations. These tools helped determine whether students' vocabulary understanding improved after engaging in flashcard-based activities. The learning sessions occurred over four meetings. In the first meeting, students took a pretest to gauge their initial vocabulary understanding. Researchers evaluated the test results using two criteria: spelling and comprehension, to see how well students understood the vocabulary. The pretest results showed that five students completed all questions, while fifteen did not. For the experimental group, the average posttest score was 59.25, with all 20 students taking the test. The highest score was 90, and the lowest was 20.

The learning process session occurred over four meetings. During the first meeting, students took a pretest to assess their initial vocabulary knowledge. The test was scored in two areas, spelling and meaning comprehension to give a more detailed view of students' vocabulary skills. The pretest results showed that only five students

met the completion criteria, while fifteen students still needed to achieve mastery. The average pretest score was 59.25, with a range of 20 to 90. The second and third meetings used flashcards as the treatment, focusing specifically on vocabulary related to body parts. In the final meeting, students took the posttest to measure their progress after the intervention. The posttest results clearly showed improvement in students' vocabulary understanding. Nineteen students met the completion criteria, and only one did not. The average posttest score rose to 82.00, with scores ranging from 45 to 100. These results indicate significant gains in both spelling and meaning comprehension after using flashcards.

The questionnaire data further supported these findings. A majority of students responded positively to flashcards, with an overall agreement rate of 56%, suggesting that students found flashcard activities engaging and beneficial. Observation notes also indicated that students were more involved and motivated during lessons that used flashcards. The visual and game-like nature of flashcards helped students more easily recognize vocabulary and associate words with their meanings (Pangesti, 2024; Lastariah et al., 2025).

Statistical analysis verified the effectiveness of the flashcard intervention. The normality test using the Kolmogorov–Smirnov statistic showed an Asymp. Sig. value of 0.129, which exceeds 0.05. This indicates that the data are normally distributed and satisfy the assumptions needed for further analysis. The homogeneity test indicated a significance value of 0.303, also greater than 0.05, suggesting that the variances between the pretest and posttest scores are consistent.

Most importantly, the Paired Samples t-Test produced a Sig. (2-tailed) value of 0.000, which is less than 0.05 significance level. This result indicates a statistically significant difference between the pretest and posttest scores. Therefore, the hypothesis that flashcard-based vocabulary games positively influence students' vocabulary understanding was accepted. These findings suggest that using flashcards significantly improves students' recognition and comprehension of English vocabulary (Sudiro et al., 2025; Deswita & Mubarak, 2025).

In administering this test, the researcher evaluated students' results using two assessments: Spelling and Understanding, to measure vocabulary comprehension. The data below shows the pre-test and post-test results for fourth-grade students. As seen in Table 1, students' vocabulary understanding significantly improved after the intervention. The average score rose from 59.25 in the pre-test to 82.00 in the post-test, and the number of students who reached the mastery criterion increased from 5 to 19.

Table 1. Pre-test and post-test results for fourth-grade students at SDN 02 Rite

| No | Students' name | Pretest score | | | Posttest score | | |
|----|----------------|---------------|---------------|------------------------|----------------|---------------|-------------------------|
| | | Spelling | Understanding | Σ pretest score | Spelling | Understanding | Σ posttest score |
| 1 | AMF | 20 | 25 | 45 | 35 | 45 | 85 |
| 2 | A | 20 | 25 | 45 | 35 | 40 | 75 |
| 3 | AA | 45 | 45 | 90 | 50 | 50 | 100 |
| 4 | AG | 20 | 25 | 45 | 30 | 35 | 65 |
| 5 | AY | 35 | 45 | 80 | 40 | 45 | 95 |
| 6 | A | 40 | 40 | 85 | 50 | 50 | 100 |
| 7 | AH | 15 | 20 | 35 | 25 | 30 | 55 |
| 8 | ASA | 35 | 40 | 80 | 40 | 50 | 95 |
| 9 | D | 30 | 30 | 60 | 40 | 50 | 85 |
| 10 | M.F | 15 | 25 | 40 | 35 | 35 | 70 |
| 11 | MIF | 20 | 30 | 50 | 30 | 40 | 70 |
| 12 | RA | 30 | 35 | 65 | 40 | 45 | 85 |
| 13 | ZN | 25 | 30 | 55 | 30 | 35 | 75 |
| 14 | F | 35 | 40 | 75 | 45 | 50 | 95 |
| 15 | MAF | 10 | 10 | 20 | 20 | 25 | 45 |
| 16 | NW | 35 | 45 | 80 | 50 | 50 | 100 |
| 17 | NA | 20 | 30 | 50 | 40 | 40 | 80 |
| 18 | N | 30 | 40 | 70 | 45 | 45 | 90 |
| 19 | N | 25 | 35 | 60 | 35 | 45 | 85 |
| 20 | RB | 25 | 30 | 55 | 40 | 50 | 90 |
| | | Total score | | 1185 | | | 1640 |
| | | Mean score | | 59,25 | | | 82,00 |
| | | Passed | | 5 | | | 19 |
| | | Not pass | | 15 | | | 1 |

The results of the pretest show that only 5 of 20 students met the mastery criterion for vocabulary understanding, while 15 did not meet the expected level. The average pretest score was 59.25, with the highest score being 90 and the lowest 20. In contrast, the posttest results demonstrate a notable improvement in student performance. A total of 19 students achieved the mastery criterion, leaving only 1 student below the standard. The average posttest score increased to 82.00, with scores ranging from 45 to 100. These results indicate a substantial increase in students' vocabulary understanding following the use of flashcard-based learning activities.

Following the implementation of flashcard-based learning activities, students' performance improved considerably. In the posttest, 19 students achieved the mastery criterion, and only one student remained below the expected level. The average posttest score increased to 82.00, with scores ranging from 45 to 100. These results

suggest a meaningful improvement in students' spelling and comprehension of meaning after participating in the flashcard-based vocabulary activities. The substantial increase in mastery rates from 25% on the pretest to 95% in the post-test further supports the intervention's effectiveness.

To determine whether the observed improvement was statistically significant, a series of inferential analyses was conducted using IBM SPSS Statistics Version 24. Before conducting the paired-samples t-test, a normality test was performed to ensure the data followed a normal distribution. The results of this analysis are shown in Table 2.

Table 2. The result of the Normality Test

| One-Sample Kolmogorov-Smirnov Test | | Unstandardized Residual |
|------------------------------------|----------------|-------------------------|
| N | | 20 |
| Normal Parameters ^{a,b} | Mean | .0000000 |
| | Std. Deviation | 7.05737214 |
| | | |
| Most Extreme Differences | Absolute | .171 |
| | Positive | .135 |
| | Negative | -.171 |
| Test Statistic | | .171 |
| Asymp. Sig. (2-tailed) | | .129 ^c |

The Kolmogorov–Smirnov test in Table 2 showed that the normality test produced an Asymp. Sig. Value of 0.129, indicating that the data were normally distributed and suitable for parametric testing. The homogeneity test yielded a p-value of 0.303, indicating that the variances between pretest and posttest scores were homogeneous. The paired-sample t-test revealed a Sig. (2-tailed) value of 0.000, which is below the 0.05 threshold. This result confirms that the improvement in students' vocabulary understanding after using flashcard media was statistically significant. Therefore, the findings support the conclusion that flashcard-based vocabulary games had a positive, measurable impact on fourth-grade students' vocabulary understanding.

In addition to the normality test, a homogeneity test was performed to assess whether the variances of the pretest and posttest scores were equal. The results of this analysis are shown in Table 3.

Table 3. The result of the Homogeneity Test

| Test of Homogeneity of Variances | | | | |
|----------------------------------|------------------|-----|-----|------|
| Learning outcomes | | | | |
| | Levene Statistic | df1 | df2 | Sig. |
| | 1.092 | 1 | 38 | .303 |

As shown in Table 3, the homogeneity test yielded a p-value greater than 0.05, indicating that the variances of the pretest and posttest scores were homogeneous. In other words, the spread of scores across both datasets was relatively equal. Meeting the homogeneity assumption ensures that the conditions for applying the paired-sample t-test are satisfied, allowing a valid comparison of students' vocabulary understanding before and after using flashcard-based vocabulary games.

After confirming that the data met the assumptions of normality and homogeneity, a paired-sample t-test was conducted to determine whether the difference between the pretest and posttest scores was statistically significant. The results of the paired-samples t-test are shown in Table 4.

Table 4. The result of the Paired Sample t-Test

| | | Paired Samples Test | | | | | | |
|-----|---------|---------------------|----------------|-----------------|---|---------|---------|-----------------|
| | | Paired Differences | | | | | | |
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | T | Sig. (2-tailed) |
| | | n | n | | Lower | Upper | | |
| Pai | PRETEST | -22.750 | 7.340 | 1.641 | -26.185 | -19.315 | -13.861 | .000 |
| r 1 | POSTEST | | | | | | 9 | |

Table 4 shows that the paired-sample t-test produced a Sig. (2-tailed) value of 0.000, which is lower than the significance level of 0.05. This result indicates a statistically significant difference between the pretest and posttest scores. The increase in students' vocabulary understanding following the flashcard-based intervention was therefore not due to chance. These findings confirm that the use of flashcard-based vocabulary games had a significant positive effect on students' vocabulary recognition and comprehension.

Discussion

The findings of this study show that the use of flashcard-based vocabulary games had a positive and meaningful impact on fourth-grade students' vocabulary

understanding. The notable improvement from a mean pretest score of 59.25 to a posttest mean of 82.00 indicates that flashcards were effective in supporting students' recognition of words and comprehension of their meanings. This result aligns with the idea that vocabulary learning is significantly enhanced when learners engage with visual and contextualized materials, as flashcards help students form associations between words and images, facilitating memory and recall (Arsyad, 2015).

The substantial increase in the number of students who achieved mastery from 5 students in the pretest to 19 in the posttest demonstrates the practicality of using flashcards for young learners who often struggle with vocabulary recognition. This finding supports previous studies by Zulaini et al., (2023) and Syamsyiah & Ma'rifatullah (2023), which also reported that flashcards improve vocabulary performance among elementary school students. However, unlike these earlier studies, which focused more broadly on vocabulary mastery, the present study specifically targeted vocabulary understanding, word recognition, and meaning comprehension, which is a foundational stage of vocabulary development and is often overlooked in prior flashcard research. This contributes to the literature by demonstrating that flashcards are particularly effective not only for mastering vocabulary but also for strengthening the basic comprehension skills that young learners need before progressing to higher-level vocabulary use.

The positive student responses further reinforce the quantitative findings. The questionnaire results showed that students enjoyed learning with flashcards, which suggests that the game-based nature of the activities contributed to their engagement and motivation. According to Switri (2022), game-based learning can improve student participation and help learners apply new knowledge in more meaningful ways. The observation data also showed increased interaction and attentiveness during flashcard sessions, supporting the view that enjoyable, visually rich learning media can reduce boredom and enhance focus during English lessons.

From a teaching perspective, these findings confirm that flashcards are a useful and practical tool for vocabulary learning, especially in situations where students lack interest or have difficulty understanding English words. For schools like SDN 02 Rite, where traditional materials and outdated methods have led to low vocabulary comprehension, flashcards offer an accessible solution that can improve learning outcomes without advanced technology. Teachers can use flashcards not only for vocabulary practice but also for games, group activities, and interactive exercises that make learning more engaging. Teachers' and learners' views on the importance of vocabulary learning appear to be peripheral beliefs shaped by their own teaching and learning experiences, suggesting that these beliefs are formed mainly through personal and practical encounters (Alshumrani, 2024).

Overall, this study's results indicate that flashcard-based vocabulary games are an effective way to support vocabulary learning in young learners. By focusing on word recognition, comprehension, and learner engagement, this study provides evidence that flashcards can help address early vocabulary challenges and strengthen students' foundational English skills. Future research could compare flashcards with other visual media, investigate long-term retention, or explore similar interventions across different grade levels to expand the scope of the findings.

CONCLUSION

Based on the results of this study, it can be concluded that the implementation of flashcard-based vocabulary games had a significant and positive effect on fourth-grade students' vocabulary understanding at SDN 02 Rite. The quantitative findings showed a substantial increase in students' performance, with the mean score improving from 59.25 in the pretest to 82.00 in the posttest. The number of students achieving mastery also increased dramatically from 5 to 19, indicating that the intervention effectively supported students' spelling and meaning comprehension. These results were further confirmed by a paired-samples t-test, which yielded a p-value of 0.000, demonstrating a statistically significant difference between students' pretest and posttest scores.

The qualitative findings from questionnaires and observations supported the test results. Students expressed positive attitudes toward the flashcard activities, and classroom observations showed increased engagement and enthusiasm during the learning process. The visual and game-based nature of flashcards helped students connect words with images more effectively, making vocabulary learning more enjoyable and accessible.

Overall, the study shows that flashcards are an effective teaching tool for improving vocabulary understanding, especially in learning environments where students struggle to recognize and understand English words. Flashcards provide a simple, affordable, and engaging way to boost learning outcomes without advanced technology. Teachers are encouraged to incorporate flashcard-based games into their lessons to help young learners develop vocabulary. Future research could examine the use of flashcards across different grade levels, compare them to other visual media, or explore their long-term effects on vocabulary retention.

REFERENCES

- Alshumrani, H.A. (2024). Unveiling vocabulary teaching and learning beliefs of teachers and learners in an EFL context. *Asian Journal of Second and Foreign Language Education*, 9, 20. <https://doi.org/10.1186/s40862-023-00242-0>
- Arsyad, A. (2015). *Learning media*. Rajagrafindo Persada.

- Deswita, D. F., & Mubarok, H. (2025). The implementation of flash card to improve simple English vocabulary for young learners. *IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature*, 13(2), 4923–4933. <https://doi.org/10.24256/ideas.v13i2.7610>
- Ilmah, S. Y., Salsabila, Z., Purnama, A., & Martiarini, E. (2026). The effectiveness of flashcard-based instruction in enhancing English vocabulary mastery among EFL learners: A systematic literature review. *Jurnal Kajian Ilmu Pendidikan (JKIP)*, 7(1), 455–462. <https://doi.org/10.55583/jkip.v7i1.1975>
- Ilsanti, A., & Anjarwati, R. (2025). Duolingo application: Its impact on students' grammar in writing context. *EnJourMe: English Journal of Merdeka*, 10(1), 59–68. <https://doi.org/10.26905/enjourme.v10i1.15787>
- Karmaker, P. R., & Al Hasan, R. (2025). Graduates' English communicative competence and its impact on academic success. *EnJourMe: English Journal of Merdeka*, 10(1), 26–40. <https://doi.org/10.26905/enjourme.v10i1.15690>
- Labanu, F., Erniwati, E., Anggreni, A., & Hasyim, Z. (2026). From playing to retention: Enhancing students' vocabulary mastery through flashcard-based instruction. *Journal of General Education and Humanities*, 5(1), 379–388. <https://doi.org/10.58421/gehu.v5i1.897>
- Lastariah, P., Trisnawati, W., & Balti, L. (2025). The development of English UNO flashcard for enhancing students' vocabulary. *Luminance: English Language & Literary Inquiry*, 1(1), 1–11.
- Le, H. H., & Luong, T. D. (2023). Using flashcard-based techniques to improve students' vocabulary retention. *Journal of Contemporary Educational Policies and Practices*, 313–325. <https://doi.org/10.52206/vje.2023.336>
- Lee, C., Ge, H. Y., & Chung, E. (2021). What linguistic features distinguish and predict L2 writing quality? *System*, 97, Article 102461. <https://doi.org/10.1016/j.system.2021.102461>
- Maamujav, U. (2021). Examining lexical features and academic vocabulary use in adolescent L2 students' text-based analytical essays. *Assessing Writing*, 49, Article 100540. <https://doi.org/10.1016/j.asw.2021.100540>
- Mohammadnejad, S., Nikdel, H., & Oroujlou, N. (2016). Reactivating EFL learners' word knowledge: Flashcards versus wordlist. *International Journal of Linguistics*, 4(4).
- Pangesti, F. W. (2024). Enhancing students' vocabulary through flashcard-based learning strategies. *Jurnal Serunai Bahasa Inggris*, 16(1), 8–12. <https://doi.org/10.37755/jsbi.v16i1.1202>
- Putra, T. A. (2018). *Development of Macromedia Flash-based animated learning media for trigonometry* (Doctoral dissertation, UIN Raden Intan Lampung).

- Rahmah, A., Suriaman, A., Maghfira, M., & Nadrun, N. (2025). The effectiveness of flashcard games to improve vocabulary mastery. *Journal of General Education and Humanities*, 4(4), 1941–1948. <https://doi.org/10.58421/gehu.v4i4.760>
- Rianti, W., Masrul, & Putra, R. E., (2024). Improving English vocabulary using flashcards. *Creation: Community Service Journal*, 1(1).
- Saad, S., & Yustisia, K. K. (2025). Corporate social responsibility in ESL education. *Semarak International Journal of Current Research in Language and Human Studies*, 2(1), 61–76. <https://doi.org/10.37934/sijcrlhs.2.1.6176>
- Saputra, A. (2025). The effectiveness of flashcard-based learning media in enhancing vocabulary skills. *Journal of Educational Innovation and Research*, 1(1), 36–41. <https://doi.org/10.0001/ebngg258>
- Saputra, D., Said, E., & Maipauw, N. J. (2020). The role of education in the millennial era. *Abdimas: Papua Journal of Community Service*, 2(1), 18–22.
- Sudiro, S., Karim, S. A., Fadillah, L. N., Istiqomah, A. N., Hasanah, R. N., & Matas, G. (2025). Enhancing English vocabulary among students with intellectual disabilities. *English Review: Journal of English Education*, 13(2), 505–516.
- Switri, E. (2022). *Educational technology and media in learning*. Qiara Media.
- Syamsyiah, N., Ma'rifatulloh, S. (2023). The effectiveness of using flashcards to improve students' vocabulary mastery. *Journal of Science and Educational Research*, 2(2). <https://doi.org/10.62759/jser.v2i2.37>
- Thariq, P. A., Husna, A., Aulia, E., Djusfi, A. R., Lestari, R., Fahrimal, Y., & Jhoanda, R. (2021). Socialization of the importance of mastering English for students. *Jurnal Pengabdian Masyarakat: Darma Bakti Teuku Umar*, 2(2), 316. <https://doi.org/10.35308/baktiku.v2i2.2835>
- Wulandari, E. M. (2025). The effectiveness of using flashcards in teaching vocabulary. *Journal of English Education and Technology*, 5(4), 324–338. <https://doi.org/10.59689/jeeet.v5i04.58>
- Zulaini, R., Cendany, N. N., & Ningrum, G. K. (2023). The effectiveness of using flashcard learning media in improving English vocabulary. *Journal of Education and Socio-Culture*, 3(5), 874–886.