

UTILIZING STORY-BASED MNEMONICS TO ENHANCE TWELFTH GRADE STUDENTS' MASTERY OF THE ACADEMIC WORD LIST

Anggun Trisnani^{*1}, Siti Ayu Surayya², M. Junaidi Marzuki³, Yulia Agustina⁴

angguntrisnani11@gmail.com^{*1}, ssurayya@hamzanwadi.ac.id²,
marzuki.mjunaidi@hamzanwadi.ac.id³, rahestin@gmail.com⁴

English Education Study Program^{*1234}
Hamzanwadi University^{*1234}

Received: August 28, 2025 Accepted: September 22, 2026 Published: September 25, 2026

ABSTRACT

Despite growing interest in mnemonic strategies for vocabulary instruction, empirical evidence on the use of story-based mnemonics to develop Academic Word List (AWL) mastery in Indonesian secondary education remains limited. This study aims to examine the effect of the story-based mnemonic technique on twelfth-grade students' mastery of the Academic Word List (AWL) at MA Al-Ijtihad Danger. This study employed a quantitative pre-experimental design using one group pre-test and post-test. The sample consisted of 30 students selected through random sampling. The instrument was 30-item AWL vocabulary test validated by experts and proven reliable (Cronbach's Alpha = 0.87). The treatment was conducted in four instructional meetings. Data were analyzed using descriptive statistics and paired samples t-test. The results showed that the mean score increased from 10.83 (SD = 2.97) in the pre-test to 18.70 (SD = 4.15) in the post-test. The paired-samples t-test revealed a significant difference ($t = -16.68$, $p < 0.05$), indicating that the story-based mnemonic technique significantly improved students' mastery of the Academic Word List. These findings suggest that integrating academic vocabulary into meaningful narratives can serve as an effective and engaging instructional strategy for enhancing academic vocabulary development in senior high school EFL classrooms.

Keywords: *Story-Based Mnemonic, Academic Word List, Vocabulary Mastery*
DOI: 10.31943/wej.v10i2.531

INTRODUCTION

Vocabulary is universally acknowledged as the foundation of language acquisition. Without sufficient vocabulary knowledge, learners are unable to comprehend input or produce meaningful output. Nation (2001) asserts that vocabulary plays a central role in the development of all four language skills listening, speaking, reading, and writing because it provides the essential building blocks for meaning construction. Similarly, Schmitt (2010) argues that vocabulary competence is a strong predictor of overall language proficiency, as learners with

broader lexical knowledge are more capable of processing language efficiently. Consequently, vocabulary instruction should be prioritized in EFL classrooms, particularly at the senior high school level where students are expected to engage with increasingly complex texts.

Despite its critical importance, vocabulary teaching practices in many Indonesian classrooms remain largely traditional. Teachers often rely on rote memorization, translation, and isolated word lists as primary instructional methods. While such approaches may help students recognize vocabulary items in the short term, they often fail to promote long-term retention and meaningful use. Zhang and Lu (2022) argue that vocabulary learning is more effective when words are introduced in meaningful and contextualized settings rather than in isolation. Contextualized learning allows students to understand how words function within discourse, thereby strengthening their ability to recall and apply vocabulary in real communicative situations. Unfortunately, the dominance of memorization-based instruction limits students' opportunities to internalize vocabulary deeply.

The challenge of vocabulary mastery becomes even more pronounced in academic contexts. Academic English differs substantially from everyday language in terms of lexical density, formality, and abstraction. Students are required to comprehend and produce texts that contain a high proportion of academic vocabulary, particularly in higher education settings. One of the most influential frameworks for academic vocabulary instruction is the Academic Word List (AWL), developed by Coxhead (2000). The AWL consists of 570 words families that frequently occur across a wide range of academic disciplines. These words are not included in the General Service List, which focuses on high-frequency general vocabulary, yet they play a crucial role in academic discourse.

Mastery of the Academic Word List is widely regarded as an essential component of academic literacy. Students who possess strong knowledge of AWL words are better equipped to comprehend academic texts, write formal essays, and perform successfully in standardized English proficiency tests. Chen et al. (2024) demonstrate that academic vocabulary knowledge significantly predicts EFL learners' reading comprehension performance. Syafri (2024) further highlights that AWL mastery contributes to higher achievement in standardized tests such as TOEFL and IELTS. For Indonesian twelfth-grade students, this issue is particularly relevant as they prepare for the transition to higher education, where academic English is often dominant. Without adequate academic vocabulary, students may struggle to cope with university-level materials, leading to academic underperformance.

Despite the recognized importance of the AWL, many Indonesian students face considerable challenges in mastering academic vocabulary. One contributing factor is the continued reliance on traditional teaching methods that emphasize memorization without sufficient contextual practice. Napitupulu et al. (2023) report that students who rely on rote memorization tend to forget vocabulary quickly and experience difficulty applying new words in reading and writing tasks. Additionally, academic vocabulary is often perceived by students as abstract and disconnected from their daily experiences, which reduces motivation and engagement. These challenges are further compounded by limited

instructional resources and teachers' restricted exposure to innovative vocabulary teaching strategies.

Motivation plays a crucial role in vocabulary acquisition, particularly when learners are confronted with complex and unfamiliar lexical items. When students perceive vocabulary learning as monotonous or overly difficult, they are less likely to invest effort in the learning process. Webb and Nation (2017) argue that effective vocabulary instruction should not only focus on form and meaning but also promote learner engagement through meaningful activities. Therefore, there is a pressing need for instructional approaches that can enhance vocabulary retention while simultaneously fostering students' motivation and interest.

One instructional approach that has gained increasing attention is the use of mnemonic strategies. Mnemonics are memory-enhancing techniques designed to facilitate the encoding, storage, and retrieval of information by creating meaningful associations. In educational contexts, mnemonic strategies have been widely applied to support learning across disciplines, including language learning. Seuleanu (2025) explains that mnemonics help learners connect new information with existing knowledge structures, thereby improving recall. In vocabulary learning, mnemonic strategies allow students to associate unfamiliar words with familiar images, concepts, or narratives, making them easier to remember.

Empirical studies have demonstrated the effectiveness of mnemonic strategies in vocabulary instruction. Auliya et al. (2024) found that Indonesian high school students who were taught vocabulary using mnemonic techniques achieved significantly higher scores than those taught through conventional methods. Their study also revealed improvements in students' confidence and motivation, suggesting that mnemonics address both cognitive and affective dimensions of learning. These findings indicate that mnemonic strategies offer a promising alternative to traditional vocabulary teaching approaches.

Among various mnemonic techniques, story-based mnemonics are particularly noteworthy. This approach embeds target vocabulary into coherent and meaningful stories, allowing learners to associate words with narratives that are easier to recall. Story-based mnemonics are theoretically supported by Dual Coding Theory, which posits that information is better retained when it is processed through both verbal and visual channels. Mayer (2002) explains that combining verbal input with imagery enhances memory retention. By integrating vocabulary into stories, learners are able to create vivid mental representations that strengthen recall.

Story-based mnemonic strategies also promote deeper cognitive processing. Craik and Lockhart (1972) argue that information processed at deeper semantic levels is more likely to be retained in long-term memory. When learners engage with vocabulary through stories, they process words in meaningful contexts rather than as isolated units. Li et al. (2022) highlight that story-based learning enhances emotional engagement, making vocabulary learning more enjoyable and sustainable. As a result, students are more likely to retain vocabulary and apply it in productive language tasks.

Several empirical studies have confirmed the effectiveness of story-based mnemonic strategies. Rahimi and Saif (2021) found that students who learned

vocabulary through stories demonstrated better retention and greater fluency in speaking and writing. Zaalishvili (2023) reported that learners exposed to story-based mnemonic instruction outperformed those taught through conventional methods in both immediate and delayed post-tests. These findings suggest that story-based mnemonics are particularly effective for long-term vocabulary retention.

In the Indonesian context, research on mnemonic strategies has shown positive outcomes, although most studies have focused on general vocabulary rather than academic vocabulary. Auliya et al. (2024) emphasize that mnemonic instruction significantly enhances vocabulary retention and learner motivation. However, studies that specifically investigate the application of story-based mnemonic techniques to the Academic Word List remain limited. This gap is significant because academic vocabulary requires deeper semantic processing and contextual understanding. Innovative approaches such as story-based mnemonics may provide the contextual richness needed to make academic vocabulary more accessible to learners.

Given this context, the present study aims to investigate the effectiveness of story-based mnemonic techniques in improving twelfth-grade students' mastery of the Academic Word List at MA Al-Ijtihad Danger. By embedding AWL vocabulary into meaningful narratives, this study seeks to enhance students' vocabulary retention, motivation, and comprehension. Furthermore, this approach encourages active learner engagement by promoting creative and contextualized vocabulary use rather than passive memorization. The findings of this study are expected to provide practical insights for English teachers regarding the implementation of innovative vocabulary instruction in senior high school contexts.

RESEARCH METHOD

This Research Method

This study employed a quantitative research approach with a pre-experimental design to examine the effectiveness of the story-based mnemonic technique in teaching academic vocabulary. Specifically, the study adopted a one-group pre-test and post-test design, which involved administering a vocabulary test to the same group of participants before and after the treatment. This design allows researchers to measure changes in students' performance as a result of the intervention.

The primary objective of this design was to determine whether there was a statistically significant improvement in students' mastery of the Academic Word List (AWL) after the implementation of the story-based mnemonic technique. The study was conducted in four instructional meetings. Each meeting was systematically designed to introduce new academic vocabulary, embed the target words into meaningful stories, and provide opportunities for guided practice and reinforcement. Although this study did not involve a control group, the comparison between pre-test and post-test scores enabled an evaluation of the effectiveness of the intervention.

Participants

The research was conducted at MA Al-Ijtihad Danger, East Lombok, during the 2025/2026 academic year. The participants of this study were 30 twelfth-grade students from class XIIIA 1. The students consisted of mixed gender and had relatively similar English proficiency levels based on their previous academic records. Simple random sampling was employed to select the participants in order to provide equal opportunity for each student in the population to be included in the study.

The selection of twelfth-grade students was based on their academic needs, as they were preparing to transition to higher education, where mastery of academic vocabulary is essential. Moreover, the participants had previously been introduced to general English vocabulary but had limited exposure to structured academic vocabulary instruction, particularly related to the Academic Word List.

Prior to data collection, ethical clearance for this study was obtained from the institutional research ethics committee. Formal permission was also granted by the school principal. All participants were informed about the purpose of the study, and their participation was voluntary. Informed consent was obtained from the students, and confidentiality of their personal information and test results was strictly maintained throughout the research process. The data were used solely for academic purposes.

Instruments

The main instrument used in this study was a vocabulary test developed based on Coxhead's (2000) Academic Word List. The test consisted of 30 items in the form of sentence completion and short paragraph exercises, designed to assess students' understanding and use of academic vocabulary in context. The same test was administered as both the pre-test and post-test to measure students' vocabulary improvement after the treatment.

Prior to its implementation, the vocabulary test was validated by two experts in English education to ensure content validity and suitability for twelfth-grade students. A pilot test was also conducted with a group of students outside the research sample to examine the reliability of the instrument. The reliability analysis using Cronbach's Alpha produced a coefficient of 0.87, indicating that the test had a high level of internal consistency and was suitable for use in this study.

Data Collection

Data collection was carried out through the administration of pre-test and post-test instruments. The pre-test was administered before the implementation of the story-based mnemonic technique to determine students' initial mastery of the Academic Word List. Following the pre-test, the treatment was conducted over four instructional meetings, during which academic vocabulary was taught through story-based mnemonic activities.

At the end of the treatment, the post-test was administered to measure students' vocabulary mastery after the intervention. The difference between the pre-test and post-test scores was used as the primary data for evaluating the

effectiveness of the story-based mnemonic technique. All tests were administered under similar conditions to ensure consistency and minimize external influences on students' performance.

Data Analysis

The collected data were analyzed using SPSS version 22. Two types of data analysis were employed in this study. First, descriptive statistical analysis was conducted to provide an overview of students' vocabulary performance. This analysis included the calculation of mean, median, mode, standard deviation, minimum score, and maximum score for both pre-test and post-test results.

Second, inferential statistical analysis was conducted to determine whether the observed improvement in students' vocabulary mastery was statistically significant. Prior to conducting the main analysis, normality and homogeneity tests were performed as prerequisite analyses. After the assumptions were met, a paired-samples t-test was applied to compare the pre-test and post-test scores. The level of significance was set at 0.05. A p-value lower than 0.05 indicated that the story-based mnemonic technique had a statistically significant effect on students' mastery of the Academic Word List. classroom.

FINDING AND DISCUSSION

Finding

This section presents the findings of the study obtained from the analysis of students' pre-test and post-test scores. The results are organized into three main parts: (1) descriptive statistics of students' vocabulary achievement, (2) prerequisite analysis, and (3) inferential statistical analysis examining the effectiveness of the story-based mnemonic technique.

Students' Vocabulary Achievement

The students' mastery of the Academic Word List (AWL) before and after the implementation of the story-based mnemonic technique was measured using a vocabulary test administered as a pre-test and a post-test. The descriptive analysis reveals a noticeable improvement in students' vocabulary performance after the treatment.

Before the intervention, students demonstrated relatively low mastery of academic vocabulary. The pre-test results showed that many students struggled to recognize and use AWL items appropriately in context. After four instructional meetings using story-based mnemonic activities, students' performance improved considerably, indicating that the treatment positively influenced their vocabulary learning.

Table 1. Students' Pre-test and Post-test Vocabulary Scores

Test	N	Mean	Standard Deviation	Minimum Score	Maximum Score
Pre-test	0	10.83	2.97	6	16
Post-test	0	18.70	4.15	11	26

As shown in Table 1, the mean score increased from 10.83 in the pre-test to 18.70 in the post-test. This indicates an average gain of 7.87 points after the implementation of the story-based mnemonic technique. The increase in the maximum score also suggests that several students achieved substantially higher levels of vocabulary mastery following the treatment. These findings demonstrate that embedding academic vocabulary into meaningful stories contributed positively to students' learning outcomes.

Prerequisite Analysis

Before conducting inferential statistical analysis, prerequisite tests were performed to ensure that the data met the assumptions required for parametric testing. The normality of the pre-test and post-test data was examined using the Kolmogorov–Smirnov test.

The results of the normality test indicated that both pre-test and post-test scores were normally distributed. The significance value for the pre-test data was greater than 0.05, and the same result was found for the post-test data. Therefore, the data fulfilled the normality assumption, allowing the use of a paired-samples t-test for further analysis.

In addition, a correlation analysis was conducted to examine the relationship between students' pre-test and post-test scores. The analysis revealed a strong positive correlation between the two sets of scores, indicating that students' relative performance remained consistent while overall achievement improved after the treatment.

Effectiveness of the Story-Based Mnemonic Technique

To determine whether the improvement in students' vocabulary mastery was statistically significant, a paired-samples t-test was conducted comparing the pre-test and post-test scores. The analysis revealed a substantial difference between the two sets of scores.

Table 2. Comparison of Pre-test and Post-test Scores

Comparison	Mean Difference	t-value	f	Sig. (p-value)
Pre-test – Post-test	-7.87	-16.68	9	0.000

As presented in Table 2, the mean difference between the pre-test and post-test scores was -7.87. The obtained t-value was -16.68 with 29 degrees of freedom, and the significance value was 0.000. Since the p-value was lower than the significance level of 0.05, it can be concluded that the improvement in students' vocabulary mastery after the treatment was statistically significant.

These results confirm that the story-based mnemonic technique had a significant positive effect on students' mastery of the Academic Word List. Students demonstrated better understanding, recall, and contextual use of academic vocabulary after learning through stories. The findings suggest that presenting AWL items within meaningful narratives helped students encode and retrieve vocabulary more effectively than traditional memorization-based instruction.

Discussion

This study aimed to investigate the effectiveness of the story-based mnemonic technique in improving twelfth-grade students' mastery of the Academic Word List (AWL). The findings demonstrated a statistically significant improvement in students' vocabulary achievement after the implementation of the treatment. The increase in the mean score from pre-test to post-test indicates that embedding AWL items into meaningful narratives facilitated better vocabulary retention and contextual understanding.

The findings of this study are consistent with previous research emphasizing the effectiveness of mnemonic strategies in vocabulary instruction. Auliya et al. (2024) found that mnemonic-based techniques significantly improved Indonesian EFL students' vocabulary mastery compared to traditional memorization methods. Similarly, Rahimi and Saif (2021) reported that story-based instruction enhanced vocabulary retention and supported productive language use. These findings align with the theoretical perspective that meaningful association strengthens memory encoding and retrieval processes (Craik & Lockhart, 1972). Moreover, Dual Coding Theory suggests that combining verbal input with mental imagery enhances retention (Mayer, 2002), which explains why embedding vocabulary in stories can improve long-term recall.

Despite these supportive findings, previous studies have predominantly focused on general vocabulary rather than academic vocabulary. Research specifically examining the integration of story-based mnemonic techniques in teaching the Academic Word List (AWL) at the secondary education level remains limited, particularly in the Indonesian EFL context. While Coxhead (2000) emphasizes the importance of AWL for academic discourse, most AWL-related studies have been conducted in tertiary settings. Furthermore, Napitupulu et al. (2023) highlighted that traditional memorization-based vocabulary instruction often fails to promote long-term retention, yet limited research has explored narrative-based mnemonic strategies as an alternative for academic vocabulary learning in senior high schools.

The unique contribution of this study lies in its focus on applying story-based mnemonic techniques specifically to the Academic Word List among twelfth-grade students preparing for higher education. Unlike prior research that emphasized general lexical development, this study provides empirical evidence that narrative-based mnemonic instruction can effectively enhance academic vocabulary mastery at the secondary school level. This finding is significant because academic vocabulary is more abstract and cognitively demanding than everyday vocabulary, requiring deeper semantic processing (Nation, 2001).

Additionally, this study contributes to the growing body of literature on contextualized vocabulary instruction. Zhang and Lu (2022) argue that vocabulary learning becomes more effective when words are introduced in meaningful contexts rather than isolation. The present study extends this argument by demonstrating that structured narrative embedding not only improves contextual understanding but also increases students' engagement in learning academic vocabulary. Therefore, this research offers both theoretical support for

contextualized mnemonic learning and practical implications for improving academic vocabulary instruction in Indonesian EFL classrooms..

The substantial improvement in students' post-test scores suggests that the story-based mnemonic technique effectively facilitated vocabulary acquisition. Prior to the intervention, students demonstrated limited mastery of AWL items, which is consistent with previous studies reporting that Indonesian EFL learners often struggle with academic vocabulary due to its abstract nature and low frequency in daily communication (Syafri, 2024). After the treatment, however, students showed better understanding and recall of academic vocabulary, indicating that the mnemonic-based approach helped them overcome initial learning difficulties. This finding supports the view that vocabulary learning becomes more effective when new lexical items are presented in meaningful and engaging contexts rather than through rote memorization (Zhang & Lu, 2022).

One possible explanation for the effectiveness of the story-based mnemonic technique lies in its ability to promote deeper cognitive processing. According to the Levels of Processing Theory, information that is processed semantically and meaningfully is more likely to be retained in long-term memory (Craik & Lockhart, 1972). In this study, students were not merely exposed to AWL items as isolated words; instead, they encountered them within coherent narratives that required interpretation and imagination. This deeper level of processing likely strengthened memory traces and enhanced recall during the post-test. As a result, students were able to retrieve academic vocabulary more efficiently.

The findings also align with Dual Coding Theory, which posits that information is better remembered when it is encoded through both verbal and visual channels (Mayer, 2002). Story-based mnemonics encourage learners to visualize events, characters, and situations associated with target vocabulary. When students formed mental images related to the stories, they created multiple pathways for memory retrieval. This dual representation may explain why students in this study demonstrated significant gains in vocabulary mastery. Similar conclusions were drawn by Li et al. (2022), who reported that narrative-based learning enhances both cognitive engagement and emotional involvement, leading to more sustainable vocabulary learning outcomes.

Another important factor contributing to the success of the story-based mnemonic technique is learner motivation. Academic vocabulary learning is often perceived by students as difficult, monotonous, and disconnected from their real-life experiences. Webb and Nation (2017) argue that motivation plays a crucial role in vocabulary acquisition, particularly when learners are required to deal with low-frequency and abstract words. In the present study, the use of stories appeared to reduce students' anxiety toward academic vocabulary and made the learning process more enjoyable. When learners are emotionally engaged, they are more likely to invest effort and persist in learning tasks. This motivational aspect may have contributed to the observed improvement in students' vocabulary scores.

The results of this study are consistent with previous empirical research on mnemonic strategies in vocabulary instruction. Auliya et al. (2024) found that Indonesian high school students who learned vocabulary through mnemonic

techniques outperformed those taught using traditional methods. Similarly, Rahimi and Saif (2021) reported that story-based instruction significantly improved learners' vocabulary retention and their ability to use new words in productive language skills. Zaalishvili (2023) also demonstrated that students exposed to story-based mnemonics achieved higher scores in both immediate and delayed post-tests. The present study extends these findings by specifically focusing on academic vocabulary, particularly the Academic Word List, which has received limited attention in prior mnemonic-based research in Indonesia.

The significant improvement observed in this study also highlights the importance of contextualized vocabulary instruction. Academic vocabulary differs from general vocabulary in terms of complexity, formality, and usage. Coxhead (2000) emphasizes that AWL items frequently occur across academic texts but are rarely encountered in everyday conversation. As a result, students often lack sufficient exposure to these words. By embedding AWL items into stories, this study provided students with repeated and meaningful exposure to academic vocabulary in context. This approach aligns with Nation's (2001) assertion that repeated encounters with words in meaningful contexts are essential for vocabulary acquisition.

From a pedagogical perspective, the findings of this study suggest that story-based mnemonic techniques can serve as an effective alternative to traditional vocabulary teaching methods in EFL classrooms. Traditional approaches that rely heavily on memorization and translation may help students recognize words temporarily but often fail to promote long-term retention and functional use (Napitupulu et al., 2023). In contrast, story-based mnemonics encourage active learning by requiring students to process vocabulary semantically, imagine scenarios, and connect words to meaningful narratives. Such activities not only enhance retention but also foster learner autonomy and creativity.

In the Indonesian senior high school context, the implementation of story-based mnemonic techniques is particularly relevant. Twelfth-grade students are preparing for higher education, where academic texts and assessments demand strong academic vocabulary knowledge. Chen et al. (2024) emphasize that academic vocabulary mastery significantly predicts students' ability to comprehend academic reading materials. Therefore, instructional approaches that effectively develop AWL knowledge can contribute to students' academic readiness. The present study demonstrates that story-based mnemonics can bridge the gap between secondary and tertiary education by equipping students with essential academic vocabulary skills.

Despite its positive findings, this study has several limitations that should be acknowledged. First, the study employed a pre-experimental design without a control group, which limits the ability to attribute improvements solely to the treatment. Although the pre-test and post-test comparison revealed significant gains, future studies employing quasi-experimental or experimental designs with control groups would provide stronger causal evidence. Second, the sample size was relatively small and limited to one class in a single school. Therefore, the

generalizability of the findings to other contexts should be approached with caution.

Future research could address these limitations by involving larger samples from multiple schools and incorporating control groups for comparison. Additionally, further studies could examine the long-term effects of story-based mnemonic techniques on vocabulary retention through delayed post-tests. Investigating the impact of this technique on other language skills, such as academic writing and reading comprehension, would also provide valuable insights. Moreover, qualitative data, such as students' perceptions and learning experiences, could enrich understanding of how story-based mnemonics influence motivation and engagement.

CONCLUSION AND SUGGESTION

This study examined the effectiveness of the story-based mnemonic technique in improving twelfth-grade students' mastery of the Academic Word List (AWL) in an Indonesian EFL context. The findings revealed a statistically significant improvement in students' academic vocabulary achievement after the treatment, indicating that embedding AWL items into meaningful narratives enhances vocabulary retention and contextual understanding. These results imply that story-based mnemonic instruction can serve as an effective and engaging alternative to traditional memorization-based vocabulary teaching in senior high school classrooms. The study also contributes theoretically by reinforcing the importance of contextualized and meaningful processing in academic vocabulary acquisition.

However, this study has several limitations. The use of a pre-experimental design without a control group limits the strength of causal conclusions, and the relatively small sample from a single school restricts the generalizability of the findings. Furthermore, the study measured short-term vocabulary improvement without examining long-term retention. Future research is therefore recommended to employ experimental designs with control groups, involve larger and more diverse samples, and investigate the long-term impact of story-based mnemonic techniques on academic vocabulary retention as well as other academic skills such as reading comprehension and academic writing.

REFERENCES

- Auliya, R., Siregar, M., & Putri, D. A. (2024). The effect of mnemonic strategies on vocabulary mastery of Indonesian EFL students. *Journal of Language Teaching and Research*, 15(2), 345–357. <https://doi.org/10.17507/jltr.1502.08>
- Baddeley, A. (2012). Working memory: Theories, models, and controversies. *Annual Review of Psychology*, 63, 1–29. <https://doi.org/10.1146/annurev-psych-120710-100422>

- Chen, Y., Wang, L., & Liu, H. (2024). Academic vocabulary knowledge and its impact on EFL learners' academic reading comprehension. *System*, 120, 103145. <https://doi.org/10.1016/j.system.2024.103145>
- Coxhead, A. (2000). A new academic word list. *TESOL Quarterly*, 34(2), 213–238. <https://doi.org/10.2307/3587951>
- Craik, F. I. M., & Lockhart, R. S. (1972). Levels of processing: A framework for memory research. *Journal of Verbal Learning and Verbal Behavior*, 11(6), 671–684. [https://doi.org/10.1016/S0022-5371\(72\)80001-X](https://doi.org/10.1016/S0022-5371(72)80001-X)
- Li, M., Zhang, Y., & Gao, X. (2022). Vocabulary learning strategies and EFL learners' writing performance. *Language Teaching Research*, 26(4), 567–586. <https://doi.org/10.1177/1362168820928827>
- Mayer, R. E. (2002). *Multimedia learning*. Cambridge University Press.
- Napitupulu, S., Harahap, A., & Sinaga, R. (2023). Rote memorization versus contextual learning in EFL vocabulary instruction. *Indonesian Journal of Applied Linguistics*, 13(1), 45–57. <https://doi.org/10.17509/ijal.v13i1.54321>
- Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge University Press.
- Rahimi, M., & Saif, S. (2021). The effect of story-based instruction on vocabulary learning and retention. *Journal of Psycholinguistic Research*, 50(4), 801–817. <https://doi.org/10.1007/s10936-021-09779-6>
- Schmitt, N. (2010). *Researching vocabulary: A vocabulary research manual*. Palgrave Macmillan.
- Seuleanu, M. (2025). Mnemonic techniques in foreign language vocabulary learning: Cognitive and pedagogical perspectives. *Journal of Educational Psychology*, 117(1), 112–126. <https://doi.org/10.1037/edu0000812>
- Sugiyono. (2012). *Metode penelitian pendidikan: Pendekatan kuantitatif, kualitatif, dan R&D*. Alfabeta.
- Syafri, F. (2024). Academic vocabulary and EFL learners' performance in standardized tests. *International Journal of English Language Studies*, 6(1), 22–35.
- Webb, S., & Nation, I. S. P. (2017). *How vocabulary is learned*. Oxford University Press.
- Zaalishvili, T. (2023). Story-based mnemonic strategies in vocabulary acquisition: A quasi-experimental study. *Journal of Language and Education*, 9(3), 45–59. <https://doi.org/10.17323/jle.2023.14589>
- Zhang, X., & Lu, X. (2022). Contextualized vocabulary learning and retention in EFL classrooms. *Applied Linguistics Review*, 13(4), 589–610. <https://doi.org/10.1515/applirev-2020-0089>