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Recognition Memory of Vocabulary (RMV) and Reading Comprehension for EFL Learners in A Pesantren-Based Junior Secondary School

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Abstract:

This research investigates the correlation between recognition memory of vocabulary (RMV) and reading comprehension among eighth-grade English as a Foreign Language (EFL) learners at MTs Favorit Darut Taqwa Dlanggu, Indonesia. Utilizing a mixed-methods research design combining quantitative correlational analysis and qualitative descriptive inquiry, the study engaged 28 participants selected through purposive sampling based on their educational level and prior learning experiences. Data collection was executed through two distinct instruments: a vocabulary recognition memory assessment comprising multiple-choice questions and a reading comprehension evaluation. The findings indicated a statistically significant and exceptionally strong positive correlation between vocabulary recognition memory and reading comprehension ($r = 0.976$, $p < 0.01$), thereby illustrating a robust connection between learners' capacity to recognize previously acquired vocabulary and their performance in comprehension tasks. Nonetheless, the results also imply that vocabulary recognition in isolation does not comprehensively account for reading comprehension, as various reading strategies, including skimming, scanning, and inference-making, were also integral to the students' comprehension processes. This study underscores the pedagogical significance of amalgamating contextualized vocabulary instruction with explicit training in reading strategies and differentiated instructional methods. The implications of these findings offer valuable pedagogical insights aimed at enhancing English literacy instruction within EFL environments, particularly in Pesantren-based educational institutions.

***Keywords**: EFL, reading comprehension, recognition memory of vocabulary, RMV*

1. INTRODUCTION

Reading comprehension is widely acknowledged as a core component of second and foreign language acquisition, particularly at the junior secondary level, where learners transition from basic decoding to more cognitively demanding text processing (Qizi, 2024; Selvathurai & Hanim Ismail, 2024; Vettori et al., 2024). As students enter their adolescence years, their cognitive capacities mature to accommodate deeper processing of texts and more complex language processing (Kaplan, 2013). Yet successful reading comprehension is not only a matter of being capable of decoding words; it also relies heavily on the depth of vocabulary knowledge, including the capacity to recognize and recall words one has previously encountered a process known as "recognition memory" (Baumann, 2021). Recognition memory allows students to access word meanings more automatically, freeing up cognitive energies for more complicated comprehension processes such as making inferences, summarizing, and synthesizing information (van den Broek et al., 2022).

In MTs Favorit Darut Taqwa Dlanggu, Indonesia, an Indonesian junior high school that learns English as a foreign language, the learning is within a formal curriculum where academic and religious values are integrate (Asman et al., 2025). The students in grade 8 are at the crucial learning phase of EFL, where academic texts are more challenging and comprehension of reading materials is a major contributor to success in all academic subjects (Kiszczak, 2019). This environment is particularly relevant due to the fact that students have minimal exposure to English outside the classroom, placing even greater emphasis on in-school learning and internal cognitive processes such as vocabulary retention (Sun et al., 2023).

While quantitative studies have consistently revealed that vocabulary knowledge is strongly allied with reading comprehension, such findings often remain limited to numerical relationships and do not fully explain *how* learners cognitively involved with vocabulary during the reading process. Reading comprehension is a complex cognitive skills that involves not only lexical access but also strategic processing, contextual interpretation, and metacognitive regulation. Therefore, relying solely on quantitative data may neglect learners' individual strategies, experiences, and challenges when recognizing and applying vocabulary in real reading situations.

Vocabulary knowledge has been understood to be a basis for reading comprehension for a while. According to Sarena et al. (2023) there is a strong level of correlation between the extent of a learner's vocabulary and their ability to comprehend written texts. More recently, however, the focus has turned to the particular role of "recognition memory" the mental ability to recall previously acquired lexical items when they are once more encountered in context. Recognition memory has been identified as a crucial component of fluent reading, as it allows readers to allocate attentional resources to higher-order comprehension processes rather than word-level decoding (Holmes, 2009; MacKay et al., 2022; Mecklinger & Bader, 2020). Palmathadka et al. (2023) highlighted how recognition memory enables readers to read with greater fluency by making word retrieval more automatic and thus reducing the cognitive effort of decoding unfamiliar words. Similarly, LaBerge & Samuels (1974) theory of automaticity suggests that fluency in word recognition allows readers to devote more attention to meaning-making rather than to lower-level word processing.

There is other research that emphasizes the value of multiple and contextualized exposures to words for building recognition memory. Ribeiro et al. (2022) found that learners who had been exposed to new vocabulary through different contextual activities reading, listening, and writing using the words had better word retention and comprehension outcomes . Dahl & Vulchanova

(2014) also found that when vocabulary is taught in meaningful contexts, students will more likely apply that knowledge to reading comprehension exercises, demonstrating a strong cognitive connection between memory processes and reading proficiency.

Despite the growing body of literature, little is known about how vocabulary recognition memory influences reading comprehension among junior secondary school students, especially those studying in Islamic boarding school environments (Abdullah, 2024). Most research has so far included primary school children or university students, with relatively few studies focusing on the middle school age range. Moreover, not much research has been conducted in Indonesian Pesantren or Islamic schools, where the learning context is shaped by religious education, disciplined routine, and moral upbringing as descried by Ulum et al. (2024) .Such a context might influence students' learning styles, motivation, and cognitive engagement with language in a different way.

In addition, the teaching in the majority of Indonesian junior high schools, MTs schools included, remains teacher-centered, with little space for communicative or contextualized language learning for the students (Rahman & Ekkayokkaya, 2024). This might potentially inhibit the development of good recognition memory as words are more likely to be taught in isolation rather than through meaningful exposure. Understanding how recognition memory operates in such contexts could result in more effective instructional strategies and curriculum design, especially in cases where students have minimal exposure to authentic English input, as emphasized by Malone (2018).

In Pesantren-based educational settings, where learning is characterized by systematic schedules, memorization practices, and strong moral discipline, students' cognitive engagement with foreign language texts may vary from those in general secondary schools. These contextual characteristics suggest that students' vocabulary recognition and reading comprehension are not only persuaded by instructional input but also by learning behaviour, strategies, and attitudes shaped by the Pesantren environment. Consequently, qualitative exploration is essential to capture students' perspectives on how they recognize vocabulary, interpret texts, and employ reading strategies within this distinctive educational context.

Empirical studies indicate that learners with stronger recognition memory demonstrate greater reading fluency, better inferencing ability, and improved comprehension accuracy (Yildiz & Çetinkaya, 2017). These findings align with the Automaticity Theory, which posits that efficient word recognition supports meaning construction by minimizing lower-level processing demands (Gagl et al., 2020; Yap et al., 2015). Collectively, this line of research suggests that recognition memory functions as a cognitive bridge between vocabulary knowledge and reading comprehension rather than merely reflecting vocabulary quantity.

Although there have been many studies conducted on the relationship of vocabulary knowledge and reading comprehension, there is still a lack of research done on the recognition memory of EFL junior secondary students in Pesantren-based schools in terms of their vocabulary. Moreover, the majority of existing research on the relationship has been on the quantity rather than the mental process involved in recognition memory. Given these considerations, an integrative methodological approach is necessary to address both the measurable relationship between vocabulary recognition memory and reading comprehension and the underlying cognitive and strategic processes that support this relationship. A mixed-methods approach allows the researcher to quantify the strength of the association between variables while concurrently exploring students' reading strategies, contextual vocabulary use, and learning experiences through qualitative inquiry.

Addressing this gap, the present study attempts to investigate the relationship between recognition memory of words and reading comprehension of the students of Grade 8 at MTs Favorit Darut Taqwa Dlanggu. In addition to examining this relationship quantitatively, the study also pursue to qualitatively explore how students employ vocabulary recognition and reading strategies during comprehension tasks. By focusing on students in this specific educational and cultural context, this study conceptualizes recognition memory as a unique cognitive mechanism that facilitates lexical access during reading and supports comprehension processes in a Pesantren-based EFL context. The findings are expected not only to contribute to theoretical discussions on cognitive processing in EFL reading but also offer practical insights for English teachers in Pesantren-based junior secondary schools seeking to improve vocabulary instruction and reading pedagogy.
This study addresses the following research questions:

1. Is there a significant relationship between students' recognition memory of vocabulary (RMV) and their reading comprehension?
2. To what extent does recognition memory of vocabulary contribute to students' reading comprehension performance?
3. How do students employ vocabulary recognition and reading strategies when comprehending English texts?

2. RESEARCH METHODOLOGY

This study employed a mixed-methods design, combining a quantitative correlational approach and a qualitative descriptive approach to study the relationship between Grade 8 students' vocabulary recognition memory and reading comprehension at MTs Favorit Darut Taqwa Dlanggu, Indonesia. The quantitative component examined the statistical relationship between the two variables, while the qualitative component explored students' reading strategies and vocabulary use during comprehension activities. In this research endeavor, the construct of recognition memory pertaining to vocabulary is systematically delineated as the capacity of students to accurately discern previously acquired lexical entities when they are presented in both isolated and contextualized multiple-choice formats, which is conceptually differentiated from the application of productive vocabulary. The correlational method was appropriate because through it, the researcher can identify and examine the statistical relationship between two variables without altering any condition or teaching setting (Putri et al., 2025). This design proves to be very helpful in educational research when studying naturally occurring variables within the context of a prevailing classroom environment.

The population for this study was 28 eighth-grade learners from the 2024/2025 academic year. Purposive sampling was used in their selection, taking into consideration certain criteria pertinent to the research goals. These were conditions: (1) students must have had a minimum of two years of formal English language instruction; (2) they must have been learning the English subject during the time of the study; and (3) they must not have any underlying cognitive or linguistic impairments that would affect their capacity to undertake reading or memory tasks. The researcher worked with English teachers to identify eligible students, and parental and student consent was obtained prior to participation.

There were two primary tools employed in this study: a vocabulary recognition memory test and a reading comprehension test. The vocabulary recognition test consisted of 30 multiple-choice items. Vocabulary items were from the school English syllabus and textbook materials taught last

semester. The quiz checked students' ability to recall and recognize the meaning of vocabulary items either through direct word-meaning correspondence or through selecting proper usage in given contexts, following principles of vocabulary assessment explained by Mohsen & Almudawis (2021). The quiz was subjected to two experienced English teachers and a language education specialist for validation of both content validity and appropriateness for the level of students' proficiency.

The reading comprehension quiz, on the other hand, consisted of five short reading passages narrative and information alike. Each passage ended with several multiple-choice questions to assess a range of comprehension skills like identifying main ideas, locating supporting details, making inferences, and identifying vocabulary usage. 25 items were used here. The texts and items were adapted from junior secondary English language courses and reformatted to the participants' level of language.

For the qualitative component, semi-structured interviews were conducted with selected students representing different achievement levels to explore their strategies in recognizing vocabulary and comprehending texts.

Data collection took place in two scheduled sessions. Students did the vocabulary recognition memory test in the first session. One week after, they completed the reading comprehension test. Both tests were administered in students' ordinary classroom setting to limit anxiety and environmental variation. Each test lasted 40 minutes and was supervised by the researcher and class teacher to achieve standardization.

For analysis of the data, the scores on the two tests were recorded and analyzed using SPSS computer software. Descriptive statistics of mean scores, standard deviations, and frequencies were employed to establish student performance on each test. Moreover, Pearson correlation was implemented because both variables encountered parametric assumptions and the study focused on measuring association instead of causal relationships. The statistical significance level was set at $p < 0.05$.

On the ethical "considerations" front, the researcher ensured there was compliance to all ethical processes. Guardians and participants were made aware of the goals and procedures of the study. Written consent was obtained, and pupils were guaranteed voluntarism. All their responses were anonymous and confidential. Pupils could withdraw from the study anytime without any negative repercussions.

3. RESULTS

The quantitative revealed statistically significant results of examining the association between vocabulary recognition memory and reading comprehension among eighth-grade EFL students. The findings are presented in sub-sections based on descriptive and inferential statistical procedures.

3.1. Descriptive Statistics and Correlation between Vocabulary Recognition and Reading Comprehension

The findings of this study provide a comprehensive understanding of the association between vocabulary recognition and reading comprehension among eighth-grade students at *MTs Favorit Darut Taqwa Dlanggu*, Indonesia. The study involved 26 students and utilized two separate instruments: a vocabulary recognition test and a reading comprehension test. The primary

objective was to examine whether students' ability to recognize previously learned vocabulary contributes significantly to their comprehension of English reading materials. The analysis involved descriptive statistics, normality testing, and Pearson Product-Moment Correlation, providing both numerical and interpretative insights into the research problem.

Descriptives

			Statistic	Std. Error
ReadingComprehension	Mean		78.75	1.820
	95% Confidence Interval for Mean	Lower Bound	75.01	
		Upper Bound	82.49	
	5% Trimmed Mean		78.97	
	Median		78.50	
	Variance		92.787	
	Std. Deviation		9.633	
	Minimum		60	
	Maximum		93	
	Range		33	
	Interquartile Range		17	
	Skewness		-.227	.441
	Kurtosis		-1.060	.858
VocabularyRecognition	Mean		81.39	1.692
	95% Confidence Interval for Mean	Lower Bound	77.92	
		Upper Bound	84.86	
	5% Trimmed Mean		81.42	
	Median		82.50	
	Variance		80.173	
	Std. Deviation		8.954	
	Minimum		66	
	Maximum		96	
	Range		30	
	Interquartile Range		16	
	Skewness		-.107	.441
	Kurtosis		-1.223	.858

The descriptive statistics revealed that the students' average performance in the vocabulary recognition test was notably high, with a mean score of 81.39 and a standard deviation of 8.954. The range of scores was from 66 to 96, indicating a relatively narrow distribution and suggesting that most students performed above average. The skewness value of -1.07 and kurtosis of -1.223 confirmed a fairly normal distribution, with scores clustering slightly above the mean. This implies that the students had a strong ability to recall and recognize English vocabulary that they had encountered in previous lessons. On the other hand, the reading comprehension scores also

demonstrated promising results. Students scored an average of 78.75, with a standard deviation of 9.633 and a score range between 60 and 93. These scores also presented a relatively symmetrical distribution, as indicated by the skewness of -0.227 and kurtosis of -1.060. Together, the descriptive results suggest that students generally possess a moderately high level of competence in both vocabulary recognition and reading comprehension, with vocabulary scores slightly outperforming reading comprehension scores.

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ReadingComprehension	.100	28	.200*	.956	28	.283
VocabularyRecognition	.092	28	.200*	.955	28	.258

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

To verify the suitability of the data for parametric testing, a normality test was conducted using both the Kolmogorov–Smirnov and Shapiro–Wilk methods. The results of the Shapiro–Wilk test showed significance values of 0.283 for reading comprehension and 0.258 for vocabulary recognition, both of which were greater than the threshold of 0.05. These values indicate that the data are normally distributed, thereby validating the use of Pearson Product-Moment Correlation for further analysis. This step is essential to ensure the reliability of the results and to uphold the assumptions of parametric correlation testing.

Correlations

		ReadingComprehension	VocabularyRecognition
ReadingComprehension	Pearson Correlation	1	.976**
	Sig. (2-tailed)		.000
	N	28	28
VocabularyRecognition	Pearson Correlation	.976**	1
	Sig. (2-tailed)	.000	
	N	28	28

**. Correlation is significant at the 0.01 level (2-tailed).

The correlation analysis yielded a Pearson correlation coefficient of 0.976 with a significance level of 0.000. This very strong positive correlation suggests that as vocabulary recognition ability increases, so does reading comprehension. The p-value, being far below 0.01, confirms the statistical significance of this relationship. This implies that students who are better at recognizing and remembering vocabulary are also more proficient in understanding and interpreting English texts.

This strong correlation supports the theoretical framework proposed by LaBerge & Samuels (1974), known as the Automaticity Theory. According to this theory, fluent reading depends heavily on the automatic recognition of words, which frees up cognitive resources for higher-level

processes such as inference, synthesis, and comprehension. In line with this, students who can rapidly and accurately identify words they have previously learned are less burdened by decoding and thus better equipped to grasp the meaning of entire sentences and paragraphs. The findings of this study provide empirical evidence for this theory within the context of English learning in a Pesantren-based junior high school. However, a deeper analysis of individual student performance reveals that the relationship between vocabulary and comprehension is not always linear or absolute.

Although most students with high vocabulary scores also scored high in reading comprehension, there were exceptions. Some students displayed strong vocabulary recognition skills but did not perform equally well on the comprehension test. This suggests that while vocabulary knowledge is essential, it is not the only factor influencing reading comprehension. Skills such as identifying the main idea, drawing inferences, understanding text structure, and interpreting figurative language also play significant roles. Students who excel in vocabulary but underperform in reading comprehension may lack practice in applying their vocabulary knowledge in meaningful and analytical ways (Cain & Oakhill, 2014). Conversely, some students with moderate vocabulary recognition scores demonstrated high reading comprehension performance. Post-test interviews revealed that these students often employed effective reading strategies such as skimming, scanning, and guessing meaning from context. This indicates that reading comprehension is a multifaceted skill, influenced not only by vocabulary knowledge but also by strategic reading behaviour and cognitive engagement (Lawrence et al., 2022).

Further examination of the vocabulary recognition test items revealed that students found context-based questions more difficult than literal meaning questions (Stoeckel et al., 2023). While many students were able to recall the definitions of words, fewer were successful when asked to determine word meanings within sentences or longer passages.This highlights a potential weakness in students' contextual vocabulary use, suggesting that vocabulary instruction should extend beyond memorization and incorporate authentic usage in reading and speaking. Similarly, in the reading comprehension test, questions requiring inference, identification of the main idea, and understanding implied meanings were more frequently answered incorrectly than straightforward factual questions. This trend suggests that critical reading skills remain underdeveloped among some students and should be an instructional priority in future lessons. These observations align with the broader understanding that language learning involves both knowledge and strategy, and that successful reading is the result of the integration of both.

Several important pedagogical implications emerge from these findings. First, vocabulary instruction must be intentional, contextual, and repetitive to support long-term retention and automatic recognition (Whitaker, 2024). Teachers should not rely solely on word lists but should embed vocabulary learning within meaningful contexts, such as reading passages, dialogues, and real-life scenarios. Second, it is vital to teach students how to apply vocabulary knowledge in varied reading situations. This can be achieved by emphasizing contextual learning through sentence construction, storytelling, and content-based learning (Muthuchamy, 2019). Third, instruction should be differentiated to accommodate learners with varying levels of proficiency. Teachers must identify students who struggle with vocabulary or comprehension and provide targeted support through remediation or enrichment activities. Fourth, explicit instruction in reading strategies is necessary. Many students benefit from being taught how to skim, scan, make predictions, summarize, and infer meaning from texts. These strategies can empower learners to approach unfamiliar texts with greater confidence and independence.

Additionally, the Pesantren learning environment may influence students' linguistic and cognitive development. While the disciplined and structured routines of Pesantren education contribute positively to memory formation and focus, they may also limit opportunities for independent, creative, and experiential learning. As such, educators should strike a balance between structure and freedom, encouraging students to engage with English texts not just for examination purposes but also for enjoyment, inquiry, and personal growth. This can help foster a more holistic approach to language acquisition, combining memorization with critical thinking, and structure with autonomy.

3.2. Contextual Vocabulary Use and Reading Strategy Application

This sub-section presents the findings related to students' ability to use vocabulary in context and their application of reading strategies during comprehension tasks. The analysis provides insights into how students integrate vocabulary knowledge with reading strategies to construct meaning from English texts.

The descriptive statistics of contextual vocabulary items indicated that students' average score was 72.15, with a standard deviation of 10.421, and a score range of 50 to 90. Compared to literal vocabulary items, which had higher mean scores, students showed relatively lower performance in applying vocabulary knowledge within sentences or passages. Skewness and kurtosis values were -0.842 and -0.976, respectively, indicating a slightly left-skewed distribution with a moderate clustering above the mean. This suggests that while students could recall word meanings, many struggled to use them accurately in contextual settings.

Analysis of the reading comprehension test revealed that questions requiring inference, identification of main ideas, and interpretation of implied meanings posed more challenges than factual questions. The mean score for inference-based items was 69.38, with a standard deviation of 11.072 and scores ranging from 45 to 88. Skewness of -0.614 and kurtosis of -0.841 indicated a fairly normal distribution, but lower scores on these items highlight gaps in higher-order reading skills. Post-test interviews confirmed that students who performed poorly on these questions often relied solely on literal word recognition, whereas those who scored higher used strategies such as skimming, scanning, and contextual guessing.

These findings suggest that students' reading comprehension is not solely determined by vocabulary knowledge but also by their ability to apply vocabulary in context and utilize effective reading strategies. Table 2 summarizes students' performance on contextual vocabulary and inference-based reading items, while Figure 2 illustrates the distribution of scores across these two components.

The results underscore the importance of integrating strategy instruction and contextualized vocabulary practice in teaching. Educators should provide ample opportunities for students to engage with vocabulary in meaningful contexts, such as reading authentic texts, constructing sentences, and practicing dialogues. Furthermore, explicit instruction on reading strategies can help students navigate complex texts more effectively, bridging the gap between vocabulary knowledge and comprehension performance.

The qualitative findings from semi-structured interviews supported the quantitative results are presented in the section 3.3.

3.3. Students' Use of Vocabulary Recognition and Reading Strategies When comprehending English Texts

This section presents the qualitative findings that explain how students employ vocabulary recognition and reading strategies during the process of comprehending English texts. The analysis focuses on the cognitive and strategic roles of vocabulary familiarity in supporting meaning construction, reading efficiency, and inferential processing.

3.3.1 Vocabulary Recognition as a Facilitator of Reading Comprehension

Students reported that familiarity with vocabulary enabled them to identify the main ideas of reading texts more easily. Recognized words functioned as semantic anchors that helped guide their overall understanding of the text. When students encountered familiar lexical items, they were able to construct meaning more efficiently and grasp the general message of the passage without extensive cognitive effort.

One student stated:

> *"If I know the words, I can understand what the text is about easily."*

This finding indicates that vocabulary recognition supports meaning construction by facilitating rapid lexical access and reducing the cognitive demands of word decoding. When readers can automatically recognize words, they are better able to allocate attention to higher-level comprehension processes, such as identifying main ideas and integrating textual information.

Recent research confirms that receptive vocabulary knowledge plays a crucial role in reading comprehension because it enables readers to access semantic information efficiently and construct coherent mental representations of text meaning (He & Deocampo, 2023). Similarly, contemporary applications of the Construction–Integration Model highlight that comprehension begins with lexical access, which forms the basis for building meaningful connections across textual units (Taky-eddine & Madaoui, 2024).

Therefore, the present findings demonstrate that vocabulary recognition functions as a foundational cognitive resource that facilitates global text understanding.

3.3.2 Vocabulary Recognition and Reading Efficiency

Several students explained that recognizing familiar vocabulary reduced confusion and minimized the need for repeated reading. This suggests that vocabulary recognition enhances reading efficiency by enabling smoother and more continuous processing of textual information.

One student reported:

> *"I don't need to read again and again if I understand the words."*

This response indicates that automatic word recognition reduces processing difficulty and helps maintain reading fluency. When readers do not need to repeatedly decode unfamiliar words, cognitive resources can be directed toward comprehension monitoring and interpretation.

This finding is consistent with recent developments in lexical processing research, which emphasize that high-quality lexical representations support automatic word recognition and reduce cognitive load during reading (MacKay et al., 2022). Empirical evidence from contemporary reading studies also demonstrates that readers with efficient lexical access exhibit higher levels of

reading fluency and comprehension efficiency because fewer cognitive resources are required for word identification, as reported in recent publications in *Reading Research Quarterly*.

Thus, vocabulary recognition contributes to reading efficiency by supporting automatic processing and reducing comprehension disruption.

3.3.3 Vocabulary Recognition as a Support for Strategic Reading Behavior

Students also reported using familiar vocabulary as a basis for interpreting unfamiliar words and constructing meaning from context. When encountering unknown vocabulary, they relied on surrounding words and sentence structure to infer meaning, particularly when some key lexical items were already recognized.

> One student explained:
> *"If I recognize some words, I can guess the other words."*

This finding indicates that vocabulary recognition supports strategic reading behavior, particularly lexical inferencing and contextual guessing. Recognized vocabulary provides semantic cues that help readers generate hypotheses about unfamiliar words and integrate new information into their understanding of the text.

Recent research in EFL reading highlights that vocabulary knowledge serves as a critical foundation for effective inferencing because readers rely on known lexical items to interpret contextual relationships and meaning patterns (e.g., Zhang & Zhang, 2022; Teng, 2023). Studies in *TESOL Quarterly* also show that learners with stronger receptive vocabulary are more successful in using contextual clues to infer word meanings and maintain comprehension continuity.

Therefore, vocabulary recognition not only supports direct understanding but also enables flexible strategic processing during reading.

4. DISCUSSION

The purpose of this study was to examine the relationship between vocabulary recognition memory and reading comprehension among eighth-grade students at *MTs Favorit Darut Taqwa Dlanggu*, Indonesia. Through the use of validated vocabulary and comprehension tests and statistical analysis, this study sought to identify whether the ability to recognize and retrieve previously learned vocabulary has a measurable impact on students' understanding of English texts. The findings confirmed a strong and significant positive correlation between the two variables, with implications that extend across cognitive theory, pedagogical practice, and language learning in Islamic junior secondary schools.

The results are in line with previous research and theoretical frameworks in the field of language learning. One of the most relevant theories underpinning this study is the Automaticity Theory developed by LaBerge & Samuels (1974), which argues that automatic recognition of words allows readers to dedicate more cognitive energy toward comprehension. When students encounter a text, they do not need to pause and decode every word manually if their recognition memory is well-developed. Instead, they can use those cognitive resources to infer meaning, make connections, and understand deeper levels of the text. This concept was evident in the current study, where students with high vocabulary recognition scores consistently performed better in reading comprehension tests (Sarena et al., 2023).

Nevertheless, the qualitative findings intricately elaborate on this relationship by demonstrating

that vocabulary recognition in isolation does not comprehensively dictate reading comprehension. Although the majority of students exhibiting elevated RMV scores attained high comprehension results, a number of students displaying robust vocabulary recognition continued to encounter challenges with inference-making and advanced comprehension tasks. This observation corroborates the assertion posited by de Sousa et al. (2020) that reading comprehension necessitates the amalgamation of lexical knowledge with superior cognitive competencies, including reasoning, inference, and text integration. In contrast, certain students with moderate vocabulary recognition achieved relatively favorable comprehension results by utilizing effective reading strategies, such as skimming, scanning, and contextual guessing. This suggests that strategic reading behaviors can, to some extent, mitigate the effects of limited vocabulary recognition, thereby reinforcing the conclusions drawn by Agustin et al. (2023) that the employment of strategies serves as a mediating factor in the process of reading comprehension.

Furthermore, the findings resonate with Nation's (2001) assertion that vocabulary size and depth significantly influence reading comprehension. However, this study extends that understanding by focusing not just on vocabulary breadth, but specifically on recognition memory how quickly and accurately students can recall the meaning of known words. Palmathadka et al. (2022) emphasize that recognition memory serves as a bridge between vocabulary acquisition and fluency, and our study offers empirical evidence for this relationship in the context of Indonesian EFL classrooms.

It is important to note that while the overall correlation was very strong ($r = 0.976$, $p < 0.01$), individual performance varied. Some students with strong vocabulary recognition did not perform equally well in reading comprehension, and vice versa. This variation underscores the multifaceted nature of reading. Vocabulary is only one component; other skills such as inference-making, main idea identification, and understanding implied meanings are equally essential. These are higher-order thinking skills that go beyond word recognition. Students who had moderate vocabulary but scored well in comprehension often employed strategic reading techniques, such as skimming, scanning, and contextual guessing (Agustin et al., 2023). These strategies enabled them to compensate for vocabulary gaps and still perform well, indicating that vocabulary knowledge, while foundational, must be integrated with metacognitive reading strategies to achieve full comprehension.

The findings also reveal specific difficulties faced by students, particularly in understanding vocabulary in context. Many students performed well on items requiring literal word meanings but struggled with items that assessed understanding based on sentence context or discourse-level meaning. This reflects a common challenge in EFL classrooms, where vocabulary is often taught in isolation rather than through authentic usage. Laufer & Rozovski-Roitblat (2015), Shin (2024), and Teng (2019) found that students retained vocabulary more effectively when words were introduced through multiple contextual exposures, such as reading, writing, and listening activities. Similarly, this study's results suggest that vocabulary instruction at MTs Favorit Darut Taqwa should shift from rote memorization to a more context-based, usage-driven approach.

The reading comprehension test results also highlighted that inference and interpretation items were the most frequently missed. These items required students to go beyond surface-level comprehension and engage with the text critically. This suggests that while vocabulary knowledge equips students with the necessary language to access a text, it does not automatically enable them to think critically about what they read. Critical reading involves understanding not just what the text says, but what it implies, what it omits, and how its structure affects meaning (Niculescu &

Dragomir, 2020). These are skills that need to be explicitly taught and practiced. The findings imply that English teachers should integrate comprehension strategy training alongside vocabulary instruction to foster more holistic reading development.

From a pedagogical perspective, several key implications emerge. First, vocabulary instruction should be designed to promote long-term recognition memory, with repeated exposure and retrieval practices in varied contexts (Yang, 2022). Teachers should avoid relying solely on word lists or isolated vocabulary drills. Instead, they should incorporate vocabulary into stories, dialogues, multimedia, and classroom discussions. Second, teaching strategies such as prediction, summarization, and questioning can empower students to actively engage with texts, making reading a more interactive and thoughtful process (Khodjakulova, 2022). Students need to be trained not just to recognize words but to apply them in reading, writing, and speaking tasks that reflect authentic language use.

Another significant implication pertains to differentiated instruction. The performance disparity among students highlights the need for tailored interventions. Some students may require intensive vocabulary support, while others may benefit more from advanced comprehension tasks. Diagnostic assessments can help identify these needs and inform personalized learning plans. Small group work, tiered assignments, and scaffolding techniques are practical ways teachers can address diverse proficiency levels in the same classroom (Sasidhar & Aruna, 2024).

The Pesantren context also plays a crucial role in shaping student learning. MTs Favorit Darut Taqwa, as part of an Islamic educational system, emphasizes discipline, structure, and moral character. These values are beneficial in promoting consistent study habits and memorization skills, which in turn support vocabulary retention. However, such environments may also discourage autonomous learning, experimentation, or risk-taking in language use skills that are important for developing reading fluency and critical thinking. Therefore, teachers in Pesantren settings should balance traditional methods with more exploratory, student-centred activities that promote independence and creativity in English language learning.

Moreover, the limited exposure to English outside the classroom remains a challenge. Students in rural Indonesian contexts like Dlanggu often lack access to English media, interactions with native speakers, or real-life usage opportunities. This makes in-class instruction even more critical. Teachers should strive to simulate authentic English environments through storytelling, role-playing, project-based learning, and digital resources. Encouraging reading for pleasure outside the curriculum such as comics, blogs, or simplified novels could also enhance both vocabulary and comprehension organically.

This study also adds to the sparse literature on language learning in Pesantren schools. While many studies focus on primary or tertiary education, the middle school context especially within Islamic boarding schools has been underrepresented. Our findings contribute to a better understanding of how vocabulary memory and reading skills develop in such a setting and provide a foundation for future research exploring interventions tailored specifically to the needs of Pesantren students.

The qualitative themes extracted from the interviews enhance the interpretation of these findings. Students consistently articulated that vocabulary recognition serves as a facilitator of comprehension, functioning as a "semantic anchor" that assists them in identifying principal ideas and sustaining reading fluency. This observation is congruent with Kintsch's (2012) Construction–Integration Model, which underscores lexical access as a fundamental phase in the formation of

coherent mental representations of textual meaning. Concurrently, students indicated that exposure to unfamiliar vocabulary exacerbated confusion and cognitive load, a result that aligns with Cognitive Load Theory (Liu, D., 2024). When students are compelled to simultaneously decode unfamiliar terms and derive meaning, their constrained working memory becomes overwhelmed, leading to diminished comprehension accuracy.

Significantly, the Pesantren-based educational context offers a unique perspective through which these results can be analyzed. The systematic routines, memorization methodologies, and disciplined learning ethos inherent in Pesantren education may positively influence recognition memory and recall mechanisms. This may, in part, elucidate the relatively elevated mean scores in vocabulary recognition observed in this investigation. Nevertheless, the same structured environment may restrict opportunities for communicative and exploratory language usage, which are crucial for the development of contextual vocabulary application and advanced reading strategies (Dickinson et al., 2019; Reynolds, 2022) .Therefore, while Pesantren environments may cultivate robust memory-oriented learning, they concurrently necessitate intentional instructional endeavors to foster strategic and analytical reading competencies.

Collectively, the findings indicate that recognition memory for vocabulary operates as a cognitive nexus between lexical knowledge and reading comprehension rather than as a discrete determinant. Vocabulary recognition establishes the essential groundwork for comprehension, yet its efficacy is optimized when it is integrated with strategic reading instruction and contextualized language exposure. This reinforces the proposition that EFL reading pedagogy should transcend mere rote memorization of vocabulary, advancing toward cohesive methodologies that amalgamate vocabulary recognition, contextual application, and explicit strategy instruction.

In summary, the relationship between vocabulary recognition memory and reading comprehension is both statistically and pedagogically significant. Students who can retrieve vocabulary with ease are more likely to comprehend English texts effectively. However, comprehension is a complex, layered skill that also depends on strategic processing, critical engagement, and contextual knowledge. The data suggest that vocabulary and comprehension should not be taught as isolated components but rather as interconnected aspects of a larger literacy framework. A combination of contextualized vocabulary learning, comprehension strategy training, and differentiated instruction is essential to improve English literacy outcomes.

As a final note, while this study provides valuable insights, it is not without limitations. The sample size was relatively small and context-specific. Future research should include a broader range of students from different schools and regions to determine whether similar trends exist.

5. CONCLUSION

In conclusion, this study provides strong empirical evidence that vocabulary recognition is closely and positively linked to reading comprehension. However, the results also indicate that vocabulary alone does not account for all variations in reading ability. Effective comprehension requires not only word knowledge but also context awareness, strategic processing, and critical thinking. Therefore, English instruction should integrate these components in a balanced and comprehensive curriculum. Teachers are encouraged to design learning experiences that combine vocabulary building with strategy training, contextual learning, and reflective reading practices (Lailan Fadila et al., 2024). Only through such a multifaceted approach can students truly develop the skills needed for successful reading comprehension in English.

Based on this research's results, some recommendations can be made for improving English teaching and learning, especially at junior high schools based on Pesantren. First, teachers must design vocabulary teaching that is meaningful, repetitive, and contextual and not merely utilize rote memorization of word lists. The inclusion of vocabulary in real reading texts, dialogue, and class discussions will make better a student's recognition memory and enhance deeper understanding. In addition, teaching reading strategies such as skimming, scanning, predicting, and inferring should be given direct focus to complement vocabulary knowledge and enable students' overall reading skills. Differentiated instruction should also be implemented by teachers to cater to students' variable levels of competence so that struggling students and advanced students receive appropriate support and challenges accordingly.

At the institutional level, curriculum planners and schools must include opportunities for students to use English beyond the textbook as in the form of supplementary readers such as graded readers, comics, and online resources. Content-based and project-based learning activities can also link vocabulary learning to academic comprehension, infusing relevance and interest into language acquisition. Moreover, with limited out-of-class exposure to English, schools need to encourage reading for pleasure and independent learning for the sake of fostering greater motivation and autonomy.

To future researchers, it is suggested in this study that the scope be extended by involving larger and more diverse numbers across regions and school contexts to validate and extend the findings. With mixed-methods approaches, such as classroom observation, interviews, or think-aloud procedures, more may be learned about students' reading strategies and cognitive processes. Additionally, an investigation into long-term influences of recognition memory training on language proficiency and reading comprehension would contribute to further generalization of vocabulary learning in EFL contexts.

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