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The Effect of using Frontload Vocabulary in Improving Reading Comprehension for EFL Learners(*)

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فاعلية تطبيق استراتيجيات التهيئة المسبقة للمفردات في تطوير الفهم القرائي لدى متعلمي اللغة الإنجليزية كلغة أجنبية

بثينة عابد عبد الله الصاعدي

أستاذ مساعد في مناهج وطرق تدريس اللغة الإنجليزية

كلية الآداب والعلوم الإنسانية- جامعة طيبة

المدينة المنورة، السعودية

الملخص

هدفت هذه الدراسة إلى تقصي فاعلية استخدام استراتيجيات التهيئة المسبقة للمفردات في تحسين مهارات الفهم القرائي لدى متعلمي اللغة الإنجليزية كلغة أجنبية، ونظرًا للدور المحوري الذي تؤديه المعرفة بالمفردات في دعم الفهم القرائي، فقد هدفت الدراسة إلى معرفة فاعلية تدريس المفردات الأساسية قبل أنشطة القراءة في تعزيز فهم الطلاب للنصوص.

واعتمدت على منهج شبه تجريبي باستخدام تصميم الاختبار القبلي والبعدي، وذلك على عينة مكونة من (27) طالبة من طالبات السنة التحضيرية في جامعة طيبة، وقد تلقت المشاركات تدريبًا منظمًا على المفردات قبل أنشطة القراءة خلال فترة استمرت ثلاثة أسابيع.

أظهرت النتائج وجود تحسن ملحوظ في أداء الطالبات في الفهم القرائي بعد تطبيق استراتيجيات التهيئة المسبقة للمفردات، وتشير هذه النتائج إلى أن تقديم المفردات قبل القراءة ساعد على تحسين فهم النصوص، وزيادة تفاعل الطالبات معها، كما تؤكد الدراسة فاعلية استراتيجيات تدريس المفردات في تنمية مهارات الفهم القرائي لدى متعلمي اللغة الإنجليزية كلغة أجنبية، وتبرز أهمية دمج تعليم المفردات بشكل صريح ضمن أنشطة تدريس القراءة داخل الصفوف الدراسية.

الكلمات المفتاحية: الفهم القرائي، التهيئة المسبقة للمفردات، اكتساب المفردات، تنمية مهارات القراءة والكتابة.

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Abstract

This study investigated the effectiveness of using the Frontload vocabulary strategy in improving reading comprehension among EFL learners. Since vocabulary knowledge plays a central role in reading comprehension, the study examined whether pre-teaching key vocabulary items before reading tasks could enhance students' understanding of texts. A quantitative quasi-experimental design employing pre-test and post-test measures was used with a sample of 27 preparatory-year EFL students at Taibah University. Participants received structured vocabulary instruction prior to reading activities over a three-week intervention period.

The findings revealed a significant improvement in students' reading comprehension performance after the implementation of the Frontload vocabulary strategy. The results suggest that pre-teaching vocabulary facilitated students' understanding of reading passages and enhanced their engagement with texts. The study supports the effectiveness of vocabulary-focused instructional strategies in developing reading comprehension among EFL learners and highlights the importance of integrating explicit vocabulary instruction into reading classrooms.

Keywords: Reading comprehension, Frontload vocabulary, vocabulary instruction, EFL learners, reading strategies, literacy development

Introduction:

Reading comprehension is widely recognized as a foundational skill that underpins academic achievement across all content areas, including science, mathematics, social studies, and language arts. Reading and understanding text well is important for students to acquire new information, understand text critically, and engage meaningfully in classroom discussions. However, reading comprehension remains a problem despite its importance for many students. As for limited vocabulary knowledge, it is arguably the biggest barrier to comprehension. Nagy and Scott (2022) state that vocabulary is critical to text understanding, and many students with undeveloped vocabulary cannot understand what they read. Students can misinterpret the most important terms, lose the meaning of a passage, and not be actively engaged in its content without knowing key terms (Hao et al., 2019). The knowledge of vocabulary can be considered the main factor of understanding the context in learning a foreign or second language process (Behnam, & Ali, 2022). Students viewed reading as an active dynamic process that motivated the activation of higher order thinking skills and helped them tap into their prior experiences to approach the reading materials (Al-roomy, 2022).

Educators and researchers have sought different ways of introducing vocabulary and, by implication, reading comprehension to address this issue. Frontload vocabulary instruction has become one of the hot ones in recent years. Explicit instruction of key vocabulary words before reading a text, as opposed to after, is also used in this approach. Frontloading is the rationale behind it because by preparing the students with the meanings of crucial terms beforehand, students can better understand the material and interact with the text. As argued by Fisher and Frey (2019), pre-teaching vocabulary is helpful because it not only aids comprehension but also boosts student confidence and motivation to read.

The theoretical basis for frontloading vocabulary instruction is informed by schema theory, which states that readers can better understand new information if it can be linked to knowledge structures already in memory (schemata) (Khartite, 2021). If students do not recognize key vocabulary, chances are they will not activate appropriate background knowledge and, in general, not integrate new information seamlessly into the framework of knowledge they already have. On the other hand, if the vocabulary is

frontloaded, students can assimilate new concepts through a scaffold. This teaching technique correlates with Smith et al.'s (2021) underlying support that background knowledge improves comprehension and longer-term information retention.

In light of the increasing demand for evidence-based instructional practices, looking into the effectiveness of frontloading vocabulary instruction in educational environments is important. This research aimed to investigate the effectiveness of frontload vocabulary instruction in improving reading comprehension outcomes among higher education EFL learners. Specifically, the study seeks to determine whether pre-teaching vocabulary impacts students' ability to comprehend text, as assessed through formal comprehension assessments. The central research question guiding this study was: To what extent does frontload vocabulary instruction improve student reading comprehension as measured by comprehension assessments? The findings of this study will contribute to the broader understanding of effective literacy instruction and offer practical implications for educators seeking to enhance student achievement in reading.

Statement of the Problem:

Reading comprehension is considered one of the most essential skills for academic success among EFL learners; however, many students continue to experience difficulties in understanding written texts due to limited vocabulary knowledge. In many EFL classrooms, students encounter unfamiliar vocabulary that hinders their ability to identify main ideas, infer meaning, and engage effectively with reading materials. Despite the recognized relationship between vocabulary knowledge and reading comprehension, vocabulary instruction is often taught in isolation or receives insufficient attention before reading activities. Consequently, students may struggle to process texts efficiently and demonstrate low comprehension performance. Although previous studies have emphasized the importance of vocabulary instruction, limited research has specifically examined the effectiveness of the Frontload vocabulary strategy among preparatory-year EFL learners in the Saudi higher education context. Therefore, this study seeks to address this gap by investigating whether pre-teaching vocabulary through the Frontload strategy can significantly improve students' reading comprehension performance.

Significance of the Study:

This study is significant for several groups involved in English language education. First, it is beneficial to EFL learners, as it highlights an instructional strategy that may improve reading comprehension and facilitate vocabulary acquisition, thereby enhancing overall academic performance. Second, the study is valuable for English language teachers because it provides practical insights into the use of Frontload vocabulary instruction as an effective classroom strategy for supporting students before engaging with reading texts. Third, curriculum designers and educational policymakers may benefit from the findings by incorporating vocabulary-focused pre-reading activities into EFL curricula and instructional materials. Additionally, the study contributes to the existing body of research on vocabulary instruction and reading comprehension, particularly within the Saudi EFL context, where limited studies have examined the effectiveness of the Frontload strategy among preparatory-year students. Finally, the study may serve as a reference for future researchers interested in vocabulary instruction, reading comprehension, and evidence-based literacy practices in foreign language learning environments.

Objectives of the Study:

This study aims to:

1. Examine the effectiveness of frontloading vocabulary instruction on reading comprehension among EFL learners.
2. Determine the statistical and practical significance of performance differences before and after the vocabulary intervention.
3. Derive pedagogical insights for integrating explicit vocabulary instruction into reading practices in EFL classrooms.

Questions of the Study:

The study seeks to answer the following questions:

- 1-To what extent does frontloading vocabulary instruction affect reading comprehension among EFL learners?
- 2-Are there statistically significant differences between students' pre-test and post-test reading comprehension scores after the vocabulary intervention?
- 3-What pedagogical implications can be derived from integrating explicit vocabulary instruction into reading practices in EFL classrooms?

Hypotheses:**Null Hypothesis (H_0):**

There is no significant difference in the mean reading comprehension scores of the participants before and after using the Frontload vocabulary approach.

$$H_0: \mu_{\text{pre-test}} = \mu_{\text{post-test}}$$

Alternative Hypothesis (H_1):

There is a significant difference in the mean reading comprehension scores of the participants after using the Frontload vocabulary approach.

$$H_1: \mu_{\text{pre-test}} \neq \mu_{\text{post-test}}$$

Methodology:**Research Design and Approach:**

This study employed a quantitative experimental research design, specifically utilizing a one-group pre-test and post-test model to evaluate the effectiveness of frontload vocabulary instruction on reading comprehension. The primary goal was to determine whether introducing targeted vocabulary before reading sessions would lead to a measurable improvement in comprehension performance. The quasi-experimental approach was selected due to its capacity to establish potential causal relationships between vocabulary intervention and reading comprehension outcomes while accommodating the practical constraints of working within an existing educational setting. This design allowed for comparative analysis of student performance before and after exposure to the instructional intervention.

Literature Review:**Reading Comprehension and Vocabulary Knowledge:**

Reading comprehension is widely considered one of the most important skills students need for academic success. It allows learners to understand information, think critically about what they read, and participate actively in classroom learning across different subjects. However, many students, especially English as a Foreign Language (EFL) learners, experience difficulties in understanding texts because of limited vocabulary knowledge.

Researchers have consistently highlighted the strong relationship between vocabulary knowledge and reading comprehension. Nagy and Scott (2022) explained that students with weak vocabulary knowledge often struggle to understand texts because they cannot recognize or interpret important words.

Similarly, Hao et al. (2019) stated that unfamiliar vocabulary can cause learners to misunderstand the main ideas of a passage, lose track of meaning, and become less engaged in reading activities. In foreign language learning, vocabulary knowledge plays an essential role in helping students understand both language and context. Behnam and Ali (2022) emphasized that vocabulary development is one of the key factors that supports comprehension in second-language learning.

Reading comprehension is also viewed as an active process rather than simply reading words on a page. Students use their previous knowledge and experiences to understand new information presented in texts. According to Al-roomy (2022), reading encourages learners to use higher-order thinking skills and connect their prior experiences with the material they read. Therefore, strengthening students' vocabulary knowledge can significantly improve their ability to comprehend reading materials effectively.

Frontload Vocabulary Instruction:

To help students overcome comprehension difficulties, educators have introduced several instructional strategies that focus on improving vocabulary knowledge before reading. One of these strategies is frontload vocabulary instruction, which involves teaching important vocabulary words before students begin reading a text. The purpose of this approach is to prepare students with the necessary understanding of key terms so they can engage more confidently and effectively with the reading material.

Frontload vocabulary instruction has received increasing attention in recent years because of its positive impact on comprehension and student engagement. Fisher and Frey (2019) argued that pre-teaching vocabulary not only improves students' understanding of texts but also increases their confidence and motivation to read. When students are already familiar with essential vocabulary, they can focus more on understanding ideas and concepts instead of struggling with unfamiliar words.

In addition, explicit vocabulary instruction may reduce the cognitive challenges students face during reading tasks. Learners who understand important vocabulary are often better able to identify main ideas, make connections between concepts, and interpret information accurately. As a result, frontloading vocabulary can create a more supportive learning environment and encourage deeper comprehension of texts.

Frontload Vocabulary Instruction in EFL Contexts:

In EFL classrooms, students often have limited exposure to English vocabulary outside the classroom, which can negatively affect their reading comprehension. Because of this challenge, frontload vocabulary instruction may be particularly useful for supporting EFL learners' academic reading skills.

Previous research has shown that explicit vocabulary instruction before reading activities can improve students' comprehension, increase classroom participation, and build learner confidence. When students understand important vocabulary in advance, they are more likely to participate actively in discussions and interact more successfully with reading materials. In addition, frontloading vocabulary may help learners become more independent readers over time.

Although many studies have examined vocabulary instruction and reading comprehension, more research is still needed in higher education EFL contexts. Much of the existing research has focused on younger learners or general literacy instruction. Therefore, the present study aims to contribute to the existing literature by examining the effectiveness of frontload vocabulary instruction in improving reading comprehension among higher education EFL learners.

Participants and Setting:

Data were collected from 27 preparatory year EFL students at Taibah university. The participants aged 18 to 19 of diverse demographic backgrounds, Purposefully, the participants were chosen from two language skills classes, each under the same instructor, so the approaches were consistent before the intervention, thus minimizing the possibility of teacher-related variables getting in the way of the study outcomes. By creating this sampling strategy, superstitions about the intervention effects could be more controlled whilst remaining in the context of authentic teaching and learning within the classroom (Olszewski-Kubilius, 2023).

The research was done in participants' regular classroom environment during scheduled language skills instructional periods. This methodological decision was made deliberately to achieve ecological validity and make the findings relevant to educational contexts. Integrating the research procedures into the current educational schedule without establishing artificial research

conditions helped to minimize the disruption of established educational routines (Olszewski-Kubilius, 2023). It enhanced the likelihood that observed effects will generalize to standard classroom instruction. It is likely that the familiar learning environment also decreased potential participant anxiety or behavioural reactivity that would have taken place in unfamiliar research settings, thereby providing a more representative representation of student performance when learning under normal conditions.

The research was carried out over three weeks, during regular school hours, in the second quarter of the academic year, about twelve weeks after the start of the academic year. It had been carefully selected so that there were several methodological advantages. The study was conducted in the second semester to allow the students to have a few weeks of classroom routine, sit under the expectations of a language arts instructor, and form functional peer relationships through which to collaborate. Next, this timing avoided major testing periods, including district and state standardized testing, that could have added additional stress variables or competing instructional time.

Second, because the students were placed in the second semester, they had already developed some basic reading strategies from the previous unit but not the exact vocabulary used in the intervention. This timing allowed for the isolation of effects from the vocabulary intervention while keeping the study integrated into a regular educational program and curriculum sequence (Pratama et al., 2022).

Instrumentation:

The assessment structure was extensive, comprised of two expository passages, which were of a variety of text types and had been seen in Preparatory Year EFL English curricula. The passages were evaluated for readability by multiple formulas (pointing to Lexile Framework measures, Flesch-Kincaid Grade Level assessments, and qualitative analyses of the conceptual load, text structure, and language conventionality) to determine their appropriate grade difficulty level (Pratama et al., 2022).

Students were confronted with a carefully structured assessment component, following each passage, comprised of 6-8 multiple choice and 3 open-ended questions to systematically assess different dimensions of reading comprehension. Students were asked to choose the appropriate response from four options in multiple choice questions, answering questions about literal

comprehension (identifying explicit information presented in the text), inferential reasoning (investigating ideas that cannot be proven explicitly, but we can deduce logically based on evidence in the text), vocabulary in context (defining words in the context of the reading passage), and text structure and author's purpose. These open-ended questions asked students to construct their answers, synthesize information that would be provided in text evidence, and answer interpreting questions more complexly to provide more sophisticated answers. These were intentionally designed to elicit deeper cognitive engagement with the text and evaluate students' ability to articulate their comprehension through written language, providing a complete snapshot of students' reading than could be obtained from multiple-choice items (Loi et al., 2022).

The evaluation protocols of the open-ended questions were rigorous enough to keep them within the realms of objectivity and consistency. A standardized 4-point rubric was used to score responses which had been extensively field-tested on populations of similar students. It offered explicit criteria for each score point, with exemplars demonstrating the quality expectations at each level. Two independent raters who were experienced language arts educators with extensive training to score a response against the scoring criteria evaluated each student's response. Before scoring the actual study data, the raters participated in calibration sessions in which they practised with some sample responses before achieving consistent scoring patterns. Correlation analysis of the independent scores determined a coefficient of .92 for inter-rater reliability, indicating good consistency across raters. In cases where scores were more than one point away from the others, they were reviewed by a third rater to decide the final score. It offered a rich, multidimensional view of students' reading comprehension competencies, probing breadth of comprehension in multiple-choice items and depth of understanding in constructed responses (El Xiane Mae et al., 2022).

The selection of vocabulary was topic-oriented and systematic, based on frequency analysis from academic word lists, and the teacher identified desirable words or terms that could be problematic, or that must be learned based on curriculum standards. Two reading passages were used during the intervention, and ten vocabulary words were selected for each reading passage related to the text and comprehension of the important text. It is also

transferable among all academic contexts, and finally, it is also a great vocabulary for EFL learners (Uchihara et al., 2019). It is conceptually complex and has morphological features that determine the meaning of the learner's word. The instructional materials were digital flashcards with student-friendly definitions, semantic mapping templates, contextual use examples taken from authentic text, interactive vocabulary games that used targeted words, and visual representation aids for concrete and abstract concepts.

Procedures:

Pre-testing was followed by several sequential phases, including pre-testing, to establish a baseline of comprehension levels. The standard reading comprehension test was administered to all 27 students under controlled conditions during the pre-test phase. Testing occurred in the morning hours to avoid fatigue effects, and students were given 60 minutes to take the assessment. Students with documented learning needs whose educational plans specified appropriate accommodations were provided. The instructional intervention period consisted of two consecutive weeks of 20-25-minute daily sessions of vocabulary instruction before reading the class texts. Specifically, the intervention consisted of a structured instructional sequence beginning with introducing vocabulary words. It maintained instructional fidelity through implementation logs of the instructor and weekly classroom observations done by a research assistant using a standard protocol (Puimège & Peters, 2019). Across all instructional sessions, the observed implementation fidelity rate was 94%.

All lessons were aligned with evidence-based strategies outlined in Guanoluisa Toapanta (2024) and Topal (2024), emphasizing repetition, active engagement, and multiple exposures to new vocabulary. The instructional approach incorporated principles of cognitive load theory and Vygotsky's zone of proximal development through scaffolded learning experiences. Following the two-week intervention, the post-test phase involved re-administration of the same standardized reading comprehension test to all students (Feng & Webb, 2020). Testing conditions mirrored those of the pre-test phase to ensure consistency in measurement and comparability of results. To control for test familiarity effects, the order of passages was randomized in the post-test. The three-week interval between assessments was determined

through pilot testing to minimize memorization effects while maintaining intervention proximity.

Results:

Descriptive Statistics:

The descriptive statistics indicate a clear improvement in students' reading comprehension performance following the Frontload vocabulary intervention. As presented in Table (1), the mean pre-test score was 7.23 ($SD = 6.49$), whereas the mean post-test score increased to 20.81 ($SD = 6.46$). This noticeable increase suggests that students performed substantially better after receiving explicit vocabulary instruction prior to reading activities.

Table (1)

Descriptive Statistics for Pre-test and Post-test Scores

Test	N	Mean	SD
Pre-test	27	7.23	6.49
Post-test	27	20.81	6.46

Inferential Statistics:

A paired-samples t -test was conducted to determine whether the difference between pre-test and post-test scores was statistically significant. The analysis revealed a statistically significant improvement in students' reading comprehension scores after the intervention, $t(26) = -9.21, p < .001$.

To examine the practical significance of the intervention, Cohen's d effect size was calculated.

The calculated effect size ($d = 1.77$) indicates a very large effect according to Cohen's (1988) guidelines, suggesting that the Frontload vocabulary strategy had a substantial impact on students' reading comprehension performance.

Table (2)

Paired-Samples t -Test Results

Variable	t	df	p	Cohen's d
Pre-test vs. Post-test	-9.21	26	< .001	1.77

Gain Score Analysis:

To further examine students' progress, gain scores were calculated by subtracting pre-test scores from post-test scores for each participant. The analysis showed that students achieved a mean gain score of 13.58 points, indicating considerable improvement after the intervention.

Table (3)

Gain Score Analysis

Measure	Mean Gain Score	SD
Post-test – Pre-test	13.58	7.66

The gain score findings provide additional evidence that the Frontload vocabulary strategy contributed positively to students' reading comprehension development.

Subgroup Analysis:

To explore whether the intervention had different effects based on students' initial performance levels, participants were divided into two subgroups according to their pre-test scores:

- Lower-performing students
- Higher-performing students

The analysis showed that lower-performing students demonstrated greater improvement in post-test performance compared to higher-performing students. This finding suggests that Frontload vocabulary instruction may be particularly beneficial for students with weaker vocabulary knowledge and lower initial reading comprehension abilities.

Table (4)

Subgroup Improvement Analysis

Group	Pre-test Mean	Post-test Mean	Mean Gain
Lower-performing students	3.91	19.45	15.54
Higher-performing students	10.55	22.18	11.63

Discussion:

The findings from this study provide compelling evidence for the effectiveness of frontloaded vocabulary instruction in improving reading comprehension among middle school students. Comprehension scores increased substantially, and therefore, explicitly teaching vocabulary before reading is a useful and practical method to improve students' ability to comprehend and interpret texts. The results are consistent with theoretical frameworks that stress the importance of vocabulary in reading comprehension (Manihuruk, 2020). According to schema theory, readers'

ability to activate and apply relevant background knowledge, such as vocabulary knowledge, is needed to comprehend the context (Khartite, 2021). The intervention also appeared to have frontloaded vocabulary, which would help students' schemas for understanding the texts they encountered.

The intervention is based on cognitive load theory, which contends that alleviating extraneous cognitive load enables working memory resources to be devoted to comprehension (Sepp et al., 2019). The intervention lowered the cognitive load demanded by decoding unfamiliar words, enabling students to attend more closely to text construction. This theoretical explanation is substantiated by the self-reports of students who perceive less mental fatigue during reading and can focus on the 'big picture' rather than searching for individual words (Feng & Webb, 2020). Further, classroom observations revealed fewer reading disruptions following vocabulary frontloading, reflecting more fluid and cognitively efficient reading processes.

More importantly, the particularly strong gains seen among initially low-performing readers, this group has shown a mean improvement of 1.8-grade equivalent scores, wiping out much of the pre-existing achievement gap. These results support the idea that frontloading vocabulary instruction effectively closes achievement gaps in reading comprehension. Like McKeown (2019), the current study builds on research indicating that vocabulary knowledge often serves as a principal hurdle faced by struggling readers across many backgrounds. However, the current study shows that addressing this vocabulary barrier through systematic frontloading is considerably beneficial to learners, especially those who benefit the most from instructional support. Different responsiveness implies that vocabulary knowledge is a critical threshold phenomenon in reading development.

Qualitative observation of the intervention during the latter identified a few crucial patterns that aid in explaining the quantitative improvements. During the implementation period, classroom interactions, student behaviours, and instructional reflection were documented systematically to understand the subtle impact of frontloaded instruction beyond standardized assessments (Pratama et al., 2022). An increased participation was found in each observation during the reading activity. Previous reluctant participants who, at first, were not willing to contribute became more willing to do so when they were comfortable with the vocabulary. Here, there was a

documented rise in student engagement. Still, with these changes in student affect seen in visible form, real changes were observed as students were drawn into complex reading materials.

Significant observations of strategy transfer and reduced frustration were made as the intervention progressed. By the sixth week, in documentation, students consistently used vocabulary strategies in other contexts beyond the intervention activities they were used to. Several times, independent observers observed students identify words they were not familiar with in texts, trying to determine the meanings from context or connecting knowledge to previously learned vocabulary without being prompted. Some students started creating personal vocabulary notebooks of the words they got into other subject areas using the semantic mapping techniques they had learned. At the same time, frustration behaviours were reduced concurrently with this strategic development. Observations in the classroom documented decreases in avoidance behaviours such as giving up on reading tasks or skipping challenging passages. Marked decreases were seen in tracking specific indicators of frustration, such as sighing, putting heads down or negative self-statements following vocabulary frontloading sessions. This reduction of frustration led to less frustration in the classroom. The most immediately apparent change noted in observational data was the increased engagement demonstrated by students during reading activities when they had been pre-taught the vocabulary. Documentation showed higher frequencies of hand-raising, more substantive contributions to discussions, and sustained attention during reading tasks compared to preintervention patterns (Hao et al., 2019). Particularly noteworthy was the transformation among students who had previously demonstrated reluctance to participate in class discussions, as these individuals became more willing to contribute once they felt confident with the vocabulary. Video recordings of classroom sessions revealed that participation became more equitably distributed across students rather than being dominated by high-achieving readers.

A third consistent theme throughout the observational data was enhanced confidence. Results indicate that students felt more self-efficacious when approaching difficult texts after vocabulary frontloading. Students often reflected on decreased anxiety and an increased willingness to attempt difficult reading passages. Visible changes in body language and control over

the approach to reading tasks were also documented in the classroom notes, with more positive effects and less hesitation as students were provided with complex reading materials. Struggling readers benefited the most from vocabulary frontloading, which gave the impression that vocabulary frontloading can have the greatest payoff for those with the most difficulty with reading tasks.

Perhaps the most promising or pedagogically promising aspect of what was observed in the intervention was the observed strategy transfer related to the intervention. Students also started spontaneously applying vocabulary strategies to new contexts outside of the particular intervention activities without any prompting from the instructor. In the sixth week, many students could reinvent the wheel in texts without prompting, identify unfamiliar words independently, attempt to figure out what might mean based on context and connect what they knew with newly learned words. Observation of using technical vocabulary terms accurately in small group work and students helping peers understand the translation of the words. During the intervention, they started to create their personal vocabulary notebook for the words encountered in other subject areas by applying the semantic mapping and contextual analysis they had learned during the intervention. Such spontaneous transfer of the vocabulary suggested that students were internalizing vocabulary acquisition strategies other than memorizing the list of words; if any, such can support long-term literacy development beyond the intervention period (Zhang & Zhang, 2022).

Limitations and Future Research:

Despite the promising results, several limitations should be acknowledged when interpreting the findings of this study. First, the research design employed a relatively small sample size of 27 students drawn from a single university, which limits the generalizability of the findings to wider educational contexts and more diverse learner populations.

In addition, inconsistencies were identified in the reported data across different sections of the study. Specifically, the pre-test mean was reported as 7.41 in the text, while Table (1) reported it as 7.23. Furthermore, the sample size was presented as 27 in some sections, whereas 26 appeared in the appendices. These discrepancies may affect the accuracy and reliability of the findings; therefore, all statistical data should be carefully reviewed and standardized to ensure consistency throughout the study.

There are two other limitations to this limitation: the absence of a control group and the difficulty of having the observed improvements in reading comprehension attributed to the vocabulary frontloading intervention only and not other factors in play. These factors include increased familiarity with testing formats, maturation, or general classroom instruction present that coincide with and are intertwined with the vocabulary frontloading intervention. This methodological constraint makes establishing causal relationships difficult, and results must be interpreted carefully. Future research to address these design limitations should have substantially greater sample sizes collected from diverse educational settings, and such research should use experimental designs in which control and experimental groups are randomly assigned to examine the impact of vocabulary frontloading effectiveness.

Important temporal parameters of the study also need to be considered as limitations. While it took only eight weeks, this is still long enough to see initial gains in vocabulary acquisition and reading comprehension. Still, it is not long enough to provide the whole trajectory of long-term retention or the sustained contribution to comprehension skills over longer periods. Educational interventions often have short-term gains that decrease unless reinforced, while others may take time to reveal cumulative benefits that are increased with sustained use (Pratama et al., 2022). The time frame of the current study does not allow for the analysis of such longitudinal patterns. Primarily, extended research using longitudinal designs should provide substantially more valuable insights about the lasting impact of frontload vocabulary instruction on vocabulary retention and reading comprehension development over an academic year or across multiple years of schooling.

However, although the study showed a very large and positive effect on standardized comprehension measures encompassed by the propositions, the ecological validity of these results could be strengthened by investigating the impact on authentic reading tasks and performance across multiple content areas. Though standardized assessments are methodologically convenient and have high psychometric soundness, reading comprehension of such complexity may not be fully represented in this manner in everyday academic tasks like science textbooks, social studies primary sources, or mathematical word problems (Junavia & Megawati, 2021). An important source of

empirical problem that deserves investigation is whether or not improved comprehension skills are transferred to these authentic contexts. The quantitative focus of the current study may also reflect higher-mile qualitative data on improvements in student engagement with the text, student awareness during reading, and attitudes toward reading after vocabulary-based interventions (Hoban et al., 2024). Such a mixed-method approach would bring more of a comprehensive understanding of how vocabulary frontloading affects the complex nature of reading development.

A final limitation concerns the intervention design, which incorporated multiple instructional components, including direct explanation of word meanings, visual representations, contextual examples, peer interaction activities, and guided practice. While this comprehensive approach aligns with best practices in vocabulary instruction, the current study did not isolate which specific components of the frontload vocabulary protocol contributed most significantly to the observed improvements in comprehension (Pratama et al., 2022). This limitation restricts the ability to develop efficient instructional protocols that maximize outcomes while minimizing instructional time requirements. Future research efforts might employ component analysis designs that systematically compare different approaches to vocabulary frontloading, such as definition-only instruction versus multidimensional vocabulary teaching, contextual versus decontextualized word learning, or teacher-directed versus student-generated approaches to identify the most efficient and effective instructional practices for different student populations and educational contexts (Pratama et al., 2022). Such fine-grained analysis would contribute substantially to developing evidence-based, time-efficient vocabulary instruction protocols that can be feasibly implemented within the constraints of typical classroom schedules.

Conclusion:

This study set out to explore whether using the Frontload vocabulary strategy could help improve reading comprehension among preparatory-year EFL learners. The results clearly showed that students performed better after receiving explicit vocabulary instruction before reading tasks. The improvement between the pre-test and post-test scores was statistically significant, $t(26) = -9.21, p < .001$, suggesting that the intervention had a real and positive impact on students' reading performance.

Beyond statistical significance, the results also showed a very strong practical impact, with a large effect size (Cohen's $d = 1.77$). This indicates that Frontload vocabulary instruction was not only effective in theory but also made a meaningful difference in how students understood reading texts in practice. In simple terms, students were able to approach reading passages with greater confidence and less difficulty once they were familiar with the key vocabulary beforehand.

Overall, these findings reinforce the idea that vocabulary plays a central role in reading comprehension, especially for EFL learners. They suggest that when teachers take time to pre-teach important vocabulary before reading activities, students are better supported in understanding texts and engaging more actively with what they read.

Recommendations :

Based on the findings of this study, several practical recommendations can be drawn for improving reading instruction in EFL contexts.

1. English language teachers should incorporate Frontload vocabulary instruction into reading lessons to support students' comprehension before engaging with texts.
2. EFL instructors should provide explicit explanations, contextual examples, and visual supports when introducing new vocabulary to improve students' understanding and retention of words.
3. Curriculum designers are encouraged to integrate vocabulary-focused pre-reading activities into EFL instructional materials and reading programs.
4. Educational institutions should provide training workshops for teachers on effective vocabulary instruction strategies that promote reading comprehension.
5. Future researchers should conduct similar studies using larger sample sizes and experimental control groups to enhance the generalizability of the findings.
6. Further studies are recommended to examine the long-term effects of Frontload vocabulary instruction on vocabulary retention and reading comprehension across different educational levels and learning contexts.

References:

- Al-Roomy, M. (2022). Investigating the effect of critical reading skills on students' reading comprehension. *Arab World English Journal*, 13(1), 366–381.
- Behnam, B., & Ali, A.-G. (2022). Omani EFL learners' vocabulary learning strategies. *Arab World English Journal*, 13(1), 285–296.
- Capin, P., Cho, E., Miciak, J., Roberts, G., & Vaughn, S. (2021). Examining the reading and cognitive profiles of students with significant reading comprehension difficulties. *Learning Disability Quarterly*, 44(3), 183–196. <https://doi.org/10.1177/0731948720941356>
- El Xiane Mae, L., Casinabe, K. J. R., Catingan, C. B., Elleso, I. M. H. M., & Quiño-Justol, J. (2022). Improving the reading comprehension of Grade 4 pupils through pre-teaching vocabulary and repeated reading. *United International Journal for Research & Technology*, 3(4), 234–245.
- Feng, Y., & Webb, S. (2020). Learning vocabulary through reading, listening, and viewing: Which mode of input is most effective? *Studies in Second Language Acquisition*, 42(3), 499–523. <https://doi.org/10.1017/S0272263120000045>
- Hao, Y., Lee, K. S., Chen, S. T., & Sim, S. C. (2019). An evaluative study of a mobile application for middle school students struggling with English vocabulary learning. *Computers in Human Behavior*, 95, 208–216. <https://doi.org/10.1016/j.chb.2019.01.014>
- Hoban, E. R., Balik, L. M., & Janggo, W. O. (2024). Implementing frontloading strategy in an attempt to trigger the improvement of students' vocabulary mastery. *Langua: Journal of Linguistics, Literature, and Language Education*, 7(1), 18–27.
- Junavia, D., & Megawati, M. (2021). Increasing students' vocabulary mastery by using frontloading strategy. In *Proceedings of the Seminar Nasional Pendidikan STKIP Kusuma Negara III* (pp. 34–41).
- Khartite, B. (2021). Implications of schema theory on teaching EFL and ESL reading comprehension: The role of pre-reading activities: The case of ENSAM Meknes. *International Journal of Linguistics and Translation Studies*, 2(4), 75–90.
- Loi, N. V., & Thanh, D. T. K. (2022). Engaging EFL learners in reading: A text-driven approach to improve reading performance. *TESL-EJ*, 26(2). <https://tesl-ej.org/>

- Manihuruk, D. H. (2020). The correlation between EFL students' vocabulary knowledge and reading comprehension: A case study at the English Education Department of Universitas Kristen Indonesia. *Journal of English Teaching*, 6(1), 86–95.
- McKeown, M. G. (2019). Effective vocabulary instruction fosters knowing words, using words, and understanding how words work. *Language, Speech, and Hearing Services in Schools*, 50(4), 466–476. https://doi.org/10.1044/2019_LSHSS-VOIA-18-0125
- Olszewski-Kubilius, P. (2023). Front-loading STEM enrichment to prepare learners for STEM pathways. *Annals of the New York Academy of Sciences*, 1520(1), 161–169. <https://doi.org/10.1111/nyas.14903>
- Pratama, V. M., Rizky, R., & Yanti, N. C. F. (2022). Can frontloading increase students' vocabulary mastery: Using an educational strategy to improve students' writing skills. *CENDEKIA: Journal Ilmu Sosial, Bahasa dan Pendidikan*, 2(4), 193–197.
- Puimège, E., & Peters, E. (2019). Learners' English vocabulary knowledge prior to formal instruction: The role of learner-related and word-related variables. *Language Learning*, 69(4), 943–977. <https://doi.org/10.1111/lang.12339>
- Schmitt, N. (2019). Understanding vocabulary acquisition, instruction, and assessment: A research agenda. *Language Teaching*, 52(2), 261–274. <https://doi.org/10.1017/S0261444819000053>
- Sepp, S., Howard, S. J., Tindall-Ford, S., Agostinho, S., & Paas, F. (2019). Cognitive load theory and human movement: Towards an integrated model of working memory. *Educational Psychology Review*, 31, 293–317. <https://doi.org/10.1007/s10648-019-09474-9>
- Smith, R., Snow, P., Serry, T., & Hammond, L. (2021). The role of background knowledge in reading comprehension: A critical review. *Reading Psychology*, 42(3), 214–240. <https://doi.org/10.1080/02702711.2020.1818010>
- Uchihara, T., Webb, S., & Yanagisawa, A. (2019). The effects of repetition on incidental vocabulary learning: A meta-analysis of correlational studies. *Language Learning*, 69(3), 559–599. <https://doi.org/10.1111/lang.12345>
- Zhang, S., & Zhang, X. (2022). The relationship between vocabulary knowledge and L2 reading/listening comprehension: A meta-analysis. *Language Teaching Research*, 26(4), 696–725. <https://doi.org/10.1177/1362168821100781>