

The Correlation Between Students' Depth of Word Knowledge and Reading

Comprehension

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ABSTRACT

Reading comprehension is a fundamental skill for EFL learners, yet many students encounter difficulties due to limited word knowledge. While breadth of word knowledge is important, depth of word knowledge has been shown to play a more decisive role in supporting comprehension. This study investigates the extent of the correlation between students' depth of word knowledge and their reading comprehension, aiming to determine how strongly word knowledge depth influences their ability to understand written texts. The research employed a quantitative correlational design. The participants were 36 fourth-semester students from the English Education Department at the University of Islam Malang, selected through random sampling. Data were collected through a word knowledge test and a reading comprehension test, distributed via Google Forms, and analyzed using SPSS version 25. The results showed a Pearson Correlation value of 0.890 with a significance level of 0.000, indicating a strong and significant correlation between students' depth of word knowledge and their reading comprehension. Students with a deeper understanding of word knowledge demonstrated higher performance in reading comprehension. In conclusion, this study emphasizes the crucial role of word knowledge depth in enhancing reading comprehension. It is recommended that English language instruction place greater focus on developing students' word knowledge depth through contextual learning, extensive reading, and varied practice to effectively improve their comprehension skills.

Keywords: depth of word knowledge, reading comprehension, correlation

INTRODUCTION

Reading comprehension is a central skill for English as a Foreign Language (EFL) learners. In higher education, students are expected to demonstrate strong reading skills to succeed academically and engage with complex materials. However, many students still encounter difficulties in comprehending texts due to insufficient vocabulary mastery. Vocabulary knowledge is widely recognized as one of the most important factors influencing reading comprehension. While vocabulary breadth (the number of words known) is often highlighted, research suggests that vocabulary depth—defined as the quality and richness of word knowledge—plays a more decisive role in supporting comprehension (Schmitt & Schmitt, 2020).

Depth of word knowledge encompasses the ability to understand not only word meanings but also associations, collocations, connotations, and contextual uses. Apriyanto and Fheriyawati (2020) argue that students with more profound vocabulary knowledge can interpret texts more effectively, make inferences, and process information more accurately. Similar findings have been reported by Rahman and Iqbal (2019), who showed that the depth of vocabulary knowledge has higher predictive power for reading comprehension than breadth.

Previous studies have emphasized the importance of depth in vocabulary learning. For example, Zhang, Pan, and Xu (2022) found that depth of word knowledge significantly correlated with ESL learners' comprehension abilities, while Cholik (2022) revealed similar results among nursing students. In contrast, Wuring (2023) found no significant correlation when academic texts were used, suggesting that the type of text and learners' proficiency level may affect outcomes.

In light of these findings, this study aims to examine the extent to which depth of word knowledge correlates with reading comprehension among fourth-semester students of the English Education Department at Universitas Islam Malang. By addressing this relationship, the study seeks to provide insights for developing more effective strategies in teaching vocabulary and reading skills.

METHOD

This research employed a **quantitative correlational design** to investigate the relationship between students' depth of word knowledge (independent variable) and their reading comprehension (dependent variable). The correlational approach is suitable as it allows examination of the degree and direction of association between two variables without manipulation (Creswell, 2022).

The population consisted of fourth-semester students in the English Education Department at a private university in Malang. A total of **36 students** were selected using random sampling, with equal representation from Class A and Class B. Randomization ensured that each student had the same probability of being chosen, thus enhancing representativeness and reducing bias.

Two instruments were used in this study:

1. Word Knowledge Test (20 multiple-choice items) adapted from Jonathan (2024), designed to measure vocabulary depth, including synonyms, antonyms, and contextual usage.
2. Reading Comprehension Test (15 multiple-choice items) adapted from Theodore (2024), measuring literal, inferential, and evaluative comprehension.

Both instruments were administered via Google Forms. To ensure validity, items were reviewed by an English education lecturer and piloted with 10 students outside the sample group. Scoring was automated, with the word knowledge test totaling 40 points and the reading comprehension test 60 points, making the combined maximum score 100.

Data collection was carried out over two weeks. Students accessed the online tests through a shared link in their class WhatsApp groups. Clear instructions were provided, and responses were restricted to single submissions through university emails to reduce dishonesty.

The data were analyzed using **SPSS version 25**. Descriptive statistics (mean, minimum, maximum, and standard deviation) were computed for both variables. The relationship between depth of word knowledge and reading comprehension was examined using the Pearson Product-Moment Correlation. Interpretation followed Sugiyono's (2018) guidelines, where a correlation coefficient between 0.80 and 1.00 indicates a powerful correlation.

FINDINGS AND DISCUSSIONS

The Table of Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Word Knowledge	36	25.00	36.00	30.4444	3.05609
Reading Comprehension	36	38.00	57.00	48.0556	5.18759
Valid N (listwise)	36				

Analysis showed that students' word knowledge scores ranged from 25 to 36, with a mean of 30.44 and a standard deviation of 3.05. Reading comprehension scores ranged from 38 to 57, with a mean of 48.05 and a standard deviation of 5.18. These results indicate moderate vocabulary depth and fairly good comprehension among participants, though variation across students was notable.

The Table of Pearson Correlation

Correlations			
		Word Knowledge	Reading Comprehension
Word Knowledge	Pearson Correlation	1	.981**
	Sig. (2-tailed)		.000
	N	36	36
Reading Comprehension	Pearson Correlation	.981**	1
	Sig. (2-tailed)	.000	
	N	36	36

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

The Pearson correlation test revealed a coefficient of **0.890** with a significance value of **0.000** (<0.01), indicating a powerful and statistically significant positive correlation between the depth of word knowledge and reading comprehension. This means students with more profound vocabulary knowledge tend to achieve higher comprehension scores. Out of the 36 students:

- 10 students achieved “Very Good” scores,
- 19 students “Good,”
- 7 students “Fair,”
- None were categorized as “Poor” or “Very Poor.”.

This distribution suggests that most students were in the higher performance range, although not all reached the top category.

The findings confirm that vocabulary depth plays a crucial role in students’ reading comprehension. The strong correlation aligns with the Nation’s Four Strands Model, which emphasizes that deep vocabulary knowledge enables learners to process words in various contexts (Yanagisawa & Webb, 2019). Similarly, the Connectionist Model suggests that richer word associations allow easier comprehension of texts (Zhang et al., 2022).

The results are consistent with previous studies. Cholikh (2022) found a Pearson correlation of 0.813 between vocabulary depth and reading comprehension among nursing students, while Rahman and Iqbal (2019) highlighted the stronger predictive power of depth compared to breadth. This study strengthens the argument that focusing on vocabulary depth is essential across different student populations and educational levels.

The strong correlation found here also reflects Vygotsky’s socio-cultural theory (cited in Cholikh, 2022), which emphasizes that linguistic development is shaped through interaction and contextual use. Students with richer exposure to words in varied contexts are more likely to develop a deeper understanding, which directly supports text comprehension.

However, the findings contrast with Wuring (2023), who reported no significant correlation in academic reading contexts. One possible explanation is that the reading materials in this study were general rather than specialized academic texts, which may have reduced difficulty and allowed the impact of vocabulary knowledge to be more directly observed. Pedagogically, these results underline the importance of teaching strategies that promote depth of vocabulary knowledge. Activities such as semantic mapping, word association exercises, extensive reading, and contextual practice can help students build stronger lexical networks and improve reading outcomes.

This study concludes that there is a very strong and significant correlation between students’ depth of word knowledge and their reading comprehension. The Pearson correlation coefficient of 0.890 confirms that students with a more profound understanding of vocabulary are more successful in comprehending texts. The findings affirm that vocabulary depth is a decisive factor in EFL learners’ reading performance.

Based on the conclusions drawn, the following suggestions are proposed. First for educators integrate vocabulary depth instruction into reading activities through contextualized practice, word association games, and collaborative discussions. Please encourage students to actively apply their vocabulary knowledge during reading tasks, such as summarizing or predicting meanings from context. Second, for students to develop independent vocabulary learning strategies, such as keeping word journals, using context clues, and practicing with synonyms and antonyms. Engage in extensive reading to encounter words in varied contexts, which supports deeper lexical understanding. Last, for future research, explore additional factors influencing reading comprehension, such as motivation, reading strategies, and learning habits. Conduct comparative studies with different types of texts (e.g., academic vs. general) to examine whether text complexity moderates the relationship between vocabulary depth and comprehension.

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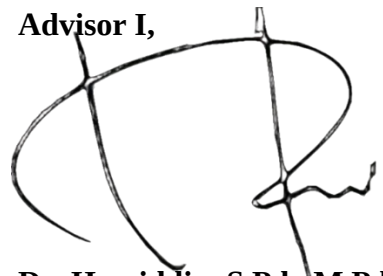
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Advisor I,

A handwritten signature in black ink, consisting of a large, stylized 'H' followed by a cursive 'D' and a small flourish at the end.

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