



The Relationship Between Reading Anxiety, Vocabulary Mastery, and Reading Comprehension Among Senior High School Students

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ABSTRACT

This study investigates the relationship between reading anxiety, vocabulary mastery, and reading comprehension among eleventh-grade students at SMA Negeri 1 Padangbolak Julu. Using a quantitative correlational design, data were collected through a reading comprehension test, a vocabulary mastery test, and a reading anxiety questionnaire. The results revealed a significant negative correlation between reading anxiety and reading comprehension, and a significant positive correlation between vocabulary mastery and reading comprehension. Moreover, a multiple regression analysis showed that reading anxiety and vocabulary mastery together significantly predicted reading comprehension, accounting for 26.8% of the variance. These findings suggest that both psychological and linguistic factors play essential roles in students' reading performance. The study recommends that educators reduce students' anxiety and enhance vocabulary instruction to improve reading outcomes.

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A. INTRODUCTION

Reading is a fundamental skill that students must master in learning English as a foreign language. Proficiency in reading not only supports academic success but also



provides students with access to a vast range of global information (Nation & Nation, 2001). However, students' reading comprehension can be significantly influenced by both psychological and linguistic factors. Among these, reading anxiety and vocabulary mastery have been identified as critical variables affecting reading performance.

Reading anxiety is a specific form of anxiety that arises when learners are exposed to reading tasks in a foreign language. According to (HORWITZ et al., 1986), foreign language anxiety is a major barrier to successful language acquisition, including reading. Students who experience reading anxiety often struggle with concentration, lack self-confidence, and tend to avoid reading activities (Liu, 2007). Recent studies have confirmed that such anxiety not only affects students emotionally but also hinders their academic performance (Ghaith, 2020; Rani, 2025).

In addition to psychological factors, vocabulary mastery plays an essential role in determining students' reading success. Vocabulary knowledge is a foundational component of text comprehension, enabling readers to identify main ideas, understand details, and make inferences (Moghadam et al., 2012). (Nation & Nation, 2001) asserts that learners must understand at least 95% of the words in a text to comprehend it effectively. Supporting this, (Lervåg & Aukrust, 2010) emphasize that efficient word recognition and retrieval contribute significantly to reading fluency and comprehension.

Field observations conducted at SMA Negeri 1 Padangbolak Julu revealed that many students exhibit signs of anxiety when encountering English texts, such as nervousness, fear of misunderstanding, and reluctance to complete reading tasks. Furthermore, mid-semester evaluation results indicated that only about 30% of eleventh-grade students scored above the school's minimum passing grade. This suggests that reading anxiety and limited vocabulary mastery remain persistent barriers to reading proficiency in this context.

Previous studies have highlighted the significant relationships among reading anxiety, vocabulary knowledge, and reading comprehension. For instance, (Tsai, 2013) reported a negative correlation between reading anxiety and reading comprehension among Taiwanese students, while (Hassan et al., 2021) found that vocabulary mastery positively correlates with reading performance among Malaysian learners. However, empirical investigations focusing on these variables within the Indonesian context—particularly in rural areas such as Padangbolak Julu—remain scarce.

This study addresses this gap by examining the simultaneous relationship between reading anxiety, vocabulary mastery, and students' reading comprehension of narrative texts. Narrative texts are selected due to their prevalence in instructional materials and national assessments. This research is expected to provide both theoretical insights and practical implications. Theoretically, it contributes to the growing body of literature on the interplay between psychological and linguistic factors in EFL reading. Practically, the findings may inform English teachers in developing effective instructional strategies to reduce reading anxiety and enhance vocabulary acquisition, ultimately improving students' reading comprehension.

B. LITERATUR REVIEW

1. Reading Anxiety Theory

Reading anxiety is a psychological barrier that negatively affects students' ability to comprehend foreign language texts. Horwitz, Horwitz, and Cope (1986) define language anxiety as a combination of self-perceptions, beliefs, attitudes, and behaviors that hinder the language learning process. Specifically, reading anxiety can manifest as fear of making mistakes, apprehension about reading aloud, and stress during reading assessments (HORWITZ et al., 1986). (Vytal et al., 2012) note that anxiety can have both facilitating and debilitating effects on performance; however, excessive anxiety impairs cognitive functioning crucial for text comprehension.

Empirical studies support the detrimental effect of reading anxiety on comprehension. (Soares et al., 2023) found a significant negative correlation between reading anxiety and reading comprehension, indicating that higher anxiety levels reduce students' reading performance. (Jones, 2022) found that children with reading difficulties experienced elevated levels of anxiety, particularly social and reading-related anxiety. While reading fluency was moderately and significantly associated with these anxieties, the link between reading anxiety and reading comprehension was weaker and not statistically significant, suggesting a nuanced relationship between anxiety types and specific reading challenges. Moreover, (Palmer, 2022) highlights that severe anxiety can cause physical symptoms such as headaches and fatigue, which further disrupt academic engagement.

2. Vocabulary Mastery

Vocabulary mastery is a critical linguistic factor influencing reading success. Nation (2001) emphasizes that a broad vocabulary is essential for effective reading

comprehension, as it facilitates quick word recognition and semantic processing. Students with extensive vocabulary knowledge are better equipped to infer meanings from context and understand both explicit and implicit information in texts (D. Zhang, 2012). (Murphy, 2023) underscores vocabulary's role in enhancing reading fluency, comprehension, academic achievement, and communication skills.

3. Schema Theory and Reading Comprehension

Schema Theory, introduced by (Anderson, 2018), posits that reading comprehension depends on the activation of the reader's prior knowledge structures or schemas. Reading is an active process where readers interpret texts by connecting new information to existing cognitive frameworks. This interaction facilitates deeper understanding and retention (Dechant, 2013). The theory further suggests that psychological factors such as anxiety and linguistic factors like vocabulary knowledge influence schema activation. High levels of reading anxiety may inhibit cognitive processes needed to activate relevant schemas, while extensive vocabulary helps readers link textual elements with prior knowledge, enhancing comprehension (Brantmeier, 2005). Hence, effective reading requires both emotional regulation and linguistic competence.

4. The Relationship among Reading Anxiety, Vocabulary Mastery, and Reading Comprehension

Several studies have examined the interrelationship among reading anxiety, vocabulary mastery, and reading comprehension. (Ghaith, 2020) found that foreign language reading anxiety negatively affects comprehension but noted that metacognitive reading strategies could mediate this impact. (S. Zhang & Zhang, 2022) further demonstrated that vocabulary mastery is a strong predictor of reading comprehension and that anxiety significantly moderates this relationship. (Jannah & Juniardi, 2025) emphasize that vocabulary difficulties often exacerbate reading anxiety, reducing students' motivation and engagement. Thus, integrated instructional approaches that simultaneously address anxiety reduction and vocabulary enhancement are vital for improving reading outcomes.

C. RESEARCH METHOD

This study was conducted at SMA Negeri 1 Padangbolak Julu, North Padanglawas Regency, where the researcher had prior experience facilitating a smooth research process. The research lasted approximately six months, including data collection through observations, interviews, tests, and consultations. Data were

collected using three validated instruments targeting reading anxiety, vocabulary mastery, and reading comprehension. Reading anxiety was measured using the 35-item Foreign Language Classroom Anxiety Scale (FLCAS) developed by (HORWITZ et al., 1986), covering test anxiety, communication apprehension, and fear of negative evaluation. Vocabulary mastery was assessed by a 25-item multiple-choice test focusing on word usage, meaning, synonyms, and antonyms. Reading comprehension was evaluated through a 40-item multiple-choice test addressing various cognitive domains such as remembering, understanding, applying, analyzing, evaluating, and creating based on narrative texts. This quantitative correlational study employed multiple regression analysis to examine the relationships among the variables: reading anxiety (X_1), vocabulary mastery (X_2), and reading comprehension (Y), following Creswell's (2012) framework.

The population comprised 150 eleventh-grade students from five classes, with a sample of 109 selected using simple random sampling and Slovin's formula (Notoatmodjo, 2010) at a 5% margin of error. The sample represented a diverse range of English proficiency levels.

Data collection methods included the FLCAS questionnaire for reading anxiety, validated vocabulary and comprehension tests. Data analysis was performed using SPSS 22 with Pearson's Product Moment Correlation to test hypotheses on the relationships between reading anxiety and comprehension, vocabulary mastery and comprehension, and their simultaneous effect. Statistical significance was determined at $p < 0.05$.

D. RESULT AND DISCUSSION

1. The Result of Research

Reading Comprehension Data

The reading comprehension test, based on narrative texts, assessed key skills such as identifying main ideas, understanding details, making inferences, and interpreting vocabulary in context. This test was aligned with the senior high school English curriculum and administered to 109 eleventh-grade students at SMA Negeri 1 Padangbolak Julu.

Table 1

Descriptive Statistics of Reading Comprehension

N	Minimum	Maximum	Mean	Std. Deviation
190	36.00	88.00	63.21	13.42

These data show that student scores ranged from 36 to 88, with an average of 63.21 and a standard deviation of 13.42. This suggests a moderate variation in reading comprehension levels.

Table 2
 Students' Reading Comprehension Levels

Level	Score Range	Frequency	Percentage (%)
Poor	0–39	5	4.6
Less	40–49	17	15.6
Fair	50–61	29	26.6
Good	62–72	36	33.0
Excellent	73–100	22	20.2
Total		109	100.0

Most students (33.0%) were categorized as having “Good” reading comprehension, while only 4.6% were classified as “Poor.”

Reading Anxiety Data

Reading anxiety was measured using a questionnaire adapted from the Foreign Language Classroom Anxiety Scale (FLCAS), covering emotional responses, confidence, and cognitive interference during English reading activities.

Table 3
 Descriptive Statistics of Reading Anxiety

N	Minimum	Maximum	Mean	Std. Deviation
109	48.00	122.00	85.37	14.18

The mean anxiety score of 85.37 and a standard deviation of 14.18 suggest that most students experienced moderate reading anxiety, with individual differences.

Table 4
 Reading Anxiety Categories

Category	Score Range	Frequency	Percentage (%)
Low	48–69	19	17.4%
Moderate	70–99	68	62.4%
High	100–140	22	20.2%
Total		109	100.0%

The majority of students (62.4%) experienced moderate reading anxiety, suggesting that while not extreme, this level of anxiety may still impact reading

performance. This implies the need for instructional strategies aimed at reducing reading-related stress.

Vocabulary Mastery Data

Vocabulary mastery was assessed using a 25-item multiple-choice test divided into three categories: word meaning, synonym-antonym recognition, and contextual usage.

Table 5
 Descriptive Statistics of Vocabulary Mastery

N	Minimum	Maximum	Mean	Std. Deviation
109	36.00	92.00	70.24	11.76

The results indicate that students' vocabulary mastery scores were moderately high on average, with a relatively normal distribution.

Table 6
 Vocabulary Mastery Levels

Level	Score Range	Frequency	Percentage (%)
Poor	0–39	3	2.8%
Less	40–64	26	23.9%
Fair	65–75	41	37.6%
Good	76–90	35	32.1%
Excellent	91–100	4	3.7%
Total		109	100.0%

Most students were classified as “Fair” (37.6%) or “Good” (32.1%), indicating a solid vocabulary foundation for understanding narrative texts.

Assumption Testing

Before conducting regression and correlation analyses, the assumptions of normality, linearity, and homogeneity were tested to validate the use of parametric statistics.

1. Normality Test

Normality was assessed using both the Kolmogorov-Smirnov and Shapiro-Wilk tests.

The results are as follows:

- Reading Anxiety: KS = 0.087, SW = 0.122
- Vocabulary Mastery: KS = 0.131, SW = 0.093
- Reading Comprehension: KS = 0.101, SW = 0.116

Since all values are > 0.05 , the assumption of normality is fulfilled for all variables.

2. Linearity Test

The assumption of linearity was tested using ANOVA. This test examined whether the relationship between the independent variables—reading anxiety and vocabulary mastery—and the dependent variable, reading comprehension, was linear. The key indicator used was the significance value in the “Deviation from Linearity” row.

For the relationship between reading anxiety and reading comprehension, the significance value was 0.397. Since this value is greater than 0.05, it indicates that there is no significant deviation from linearity, and therefore the relationship can be considered linear.

Similarly, the relationship between vocabulary mastery and reading comprehension yielded a significance value of 0.776. As this value also exceeds the 0.05 threshold, it confirms that the relationship is linear.

In conclusion, both independent variables—reading anxiety and vocabulary mastery—demonstrate a linear relationship with reading comprehension, meeting the linearity assumption required for subsequent parametric analyses.

3. Homogeneity Test

Table 7
Homogeneity Test

Variable	Sig. Value
Reading Anxiety	0.211
Vocabulary Mastery	0.054

Both values exceed 0.05, confirming that the homogeneity assumption is met.

4. Hypothesis Testing

This section evaluates the three hypotheses:

- H1: There is a significant relationship between reading anxiety and reading comprehension.
- H2: There is a significant relationship between vocabulary mastery and reading comprehension.
- H3: There is a significant simultaneous relationship between reading anxiety and vocabulary mastery with reading comprehension.

1. Partial T-Test (Multiple Linear Regression)

Table 8
 Partial T-Test Results

Predictor	B	t	Sig.
Reading Anxiety (X ₁)	-0.298	-2.614	0.010
Vocabulary Mastery (X ₂)	0.376	2.984	0.004

- Reading anxiety had a significant negative effect on reading comprehension (p = 0.010).
- Vocabulary mastery had a significant positive effect (p = 0.004).

Thus, both H1 and H2 are accepted.

2. Simultaneous F-Test (ANOVA)

Table 9
 ANOVA Summary

F	Sig.
18.312	0.000

The significance value of 0.000 indicates that reading anxiety and vocabulary mastery jointly have a significant effect on reading comprehension. Hence, H3 is accepted.

3. Coefficient of Determination (R²)

Table 10
 Coefficient of Determination

R	R ²	Adjusted R ²	Std. Error
0.518	0.268	0.253	13.70

Approximately 26.8% of the variance in reading comprehension scores can be explained by the combination of reading anxiety and vocabulary mastery, while the remaining 73.2% may be influenced by other unmeasured factors such as grammar knowledge, motivation, or prior knowledge.

2. The Discussion

The Influence of Reading Anxiety on Reading Comprehension

The findings of this study indicate a significant negative correlation between students' reading anxiety and their reading comprehension abilities. Specifically, higher levels of reading anxiety are associated with lower reading comprehension

scores. This aligns with previous research that has demonstrated the detrimental effects of reading anxiety on students' ability to process and understand texts in a foreign language.

For instance, (Annura et al., 2024) found a moderate negative correlation ($r = -0.522$) between reading anxiety and reading comprehension among EFL students in Indonesia, suggesting that anxiety interferes with cognitive processes essential for understanding texts. Similarly, (Wijayati et al., 2021) reported that students experiencing higher levels of reading anxiety performed worse in reading comprehension tasks, highlighting the need for interventions to reduce anxiety in language learning contexts.

These findings underscore the importance of addressing emotional factors in language education. Educators should consider implementing strategies to alleviate reading anxiety, such as providing supportive learning environments, incorporating anxiety-reducing activities, and offering positive feedback to build students' confidence.

The Role of Vocabulary Mastery in Reading Comprehension

The study also reveals a significant positive correlation between students' vocabulary mastery and their reading comprehension performance. Students with a higher level of vocabulary knowledge tend to comprehend texts more effectively. This is consistent with the notion that a robust vocabulary is fundamental to understanding written material.

Research by (Iffah et al., 2023) supports this finding, demonstrating a strong positive correlation ($r = 0.680$) between vocabulary mastery and reading comprehension among junior high school students. Additionally, (Fahrurrozi, 2017) reported that vocabulary mastery contributed significantly to students' reading comprehension abilities, emphasizing the need for vocabulary development in language instruction.

These results suggest that vocabulary instruction should be a central component of language education. Teachers can enhance students' vocabulary through explicit teaching of word meanings, exposure to diverse texts, and engaging activities that promote word learning.

The Combined Effect of Reading Anxiety and Vocabulary Mastery on Reading Comprehension

The multiple regression analysis indicates that reading anxiety and vocabulary mastery together account for 26.8% of the variance in students' reading comprehension scores. This suggests that while both factors significantly influence reading comprehension, other variables also play a role.

This finding aligns with the study by (Fahrurrozi, 2017), which found that vocabulary mastery and reading interest together explained 76.2% of the variance in reading comprehension, indicating that multiple factors contribute to reading success. Therefore, educators should adopt a holistic approach to reading instruction that addresses both linguistic and affective components. By simultaneously focusing on reducing reading anxiety and enhancing vocabulary knowledge, teachers can create more effective learning experiences that support students' reading development.

E. CONCLUSION

This study concludes that reading anxiety negatively affects students' reading comprehension, while vocabulary mastery has a positive influence. Furthermore, both variables significantly and simultaneously contribute to reading comprehension, although other factors also play a role. These findings highlight the importance of addressing both emotional and linguistic aspects in reading instruction.

It is recommended that teachers implement strategies to reduce reading anxiety, such as confidence-building activities and supportive classroom environments, while also prioritizing vocabulary development through meaningful and contextual learning to enhance students' reading proficiency.

REFERENCES

- Anderson, R. C. (2018). Role of the reader's schema in comprehension, learning, and memory. In *Theoretical models and processes of literacy* (pp. 136–145). Routledge.
- Annura, T., Warna, D., & Sartika, E. (2024). THE CORRELATION BETWEEN READING ANXIETY AND READING COMPREHENSION ACHIEVEMENT EFL OF MAN 2 PALEMBANG. *Premise: Journal of English Education*, 13(3), 911. <https://doi.org/10.24127/pj.v13i3.10631>
- Brantmeier, C. (2005). Anxiety about L2 reading or L2 reading tasks? A study with advanced language learners. *Reading*, 5(2), 67–85.

- Dechant, E. (2013). *Understanding and teaching reading: An interactive model*. Routledge.
- Fahrurrozi. (2017). Relationship between Students' Reading Interest and Vocabulary Mastery with Reading Comprehension ability. *Conference: 9th International Conference for Science Educators and Teachers (ICSET 2017)*.
<https://doi.org/http://dx.doi.org/10.2991/icset-17.2017.59>
- Ghaith, G. (2020). Foreign language reading anxiety and metacognitive strategies in undergraduates' reading comprehension. *Issues in Educational Research*, 30, 1310–1328.
- Hassan, I., Latiff Azmi, M. N., Muhamad, S. N., & Abdullah, A. T. H. (2021). Reading habits and their correlation with reading achievement among ESL learners in selected Malaysian secondary schools. *Arab World English Journal (AWEJ) Volume*, 12.
- HORWITZ, E. K., HORWITZ, M. B., & COPE, J. (1986). Foreign Language Classroom Anxiety. *The Modern Language Journal*, 70(2), 125–132. <https://doi.org/10.1111/j.1540-4781.1986.tb05256.x>
- Iffah, U., Albadri, A., & Faizeh De Shofi Emilia. (2023). The Correlation Between Students' Vocabulary Mastery and Students' Reading Comprehension in Narrative Text. *JOEY: Journal of English Ibrahimy*, 2(2), 56–65. <https://doi.org/10.35316/joey.2023.v2i2.56-65>
- Jannah, A., & Juniardi, Y. (2025). Anxiety vs. Understanding: How Reading Stress Affects Language Learners' Comprehension? *JETLEE: Journal of English Language Teaching, Linguistics, and Literature*, 5(1), 106–120.
- Jones, A. R. (2022). *The relationship between poor reading and anxiety in children*. Macquarie University.
- Lervåg, A., & Aukrust, V. G. (2010). Vocabulary knowledge is a critical determinant of the difference in reading comprehension growth between first and second language learners. *Journal of Child Psychology and Psychiatry*, 51(5), 612–620.
<https://doi.org/10.1111/j.1469-7610.2009.02185.x>
- Liu, M. (2007). Anxiety in Oral English Classrooms: a Case Study in China. *Indonesian Journal of English Language Teaching*, 3(1), 119–137. <https://doi.org/10.25170/ijelt.v3i1.132>
- Moghadam, S. H., Zainal, Z., & Ghaderpour, M. (2012). A Review on the Important Role of Vocabulary Knowledge in Reading Comprehension Performance. *Procedia - Social and Behavioral Sciences*, 66, 555–563.
<https://doi.org/https://doi.org/10.1016/j.sbspro.2012.11.300>
- Murphy, D. D. (2023). *Teaching Literacy Foundations*.
- Nation, I. S. P., & Nation, I. S. P. (2001). *Learning vocabulary in another language* (Vol. 10). Cambridge university press Cambridge.
- Palmer, C. M. (2022). *Brain energy: A revolutionary breakthrough in understanding mental health--and improving treatment for anxiety, depression, OCD, PTSD, and more*. BenBella Books.
- Rani, S. (2025). Studying the impact of anxiety, stress, and emotion on academic performance:

- A systematic review. *Journal of Social, Humanity, and Education*, 5(2), 131–141.
<https://doi.org/10.35912/jshe.v5i2.2437>
- Soares, S., Boyes, M. E., Parrila, R., & Badcock, N. A. (2023). Does reading anxiety impact on academic achievement in higher education students? *Dyslexia*, 29(3), 179–198.
- Tsai, C.-C. (2013). Exploring the Relationships between Reading Anxiety and Reading Strategy Use among University Students in Taiwan. *International Journal of English and Education*, 2(4).
- Vytal, K., Cornwell, B., Arkin, N., & Grillon, C. (2012). Describing the interplay between anxiety and cognition: from impaired performance under low cognitive load to reduced anxiety under high load. *Psychophysiology*, 49(6), 842–852.
- Wijayati, P. H., Mardianti, N., & Murtadho, N. (2021). The Correlation Between Students' Reading Anxiety and Their Reading Comprehension in ESP Context. *International Journal of Language Education*, 5(2), 15. <https://doi.org/10.26858/ijole.v5i2.15440>
- Zhang, D. (2012). Vocabulary and grammar knowledge in second language reading comprehension: A structural equation modeling study. *The Modern Language Journal*, 96(4), 558–575.
- 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.