

## Investigating Vocabulary Proficiency in Argumentative Text Comprehension Among Senior High School Students

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### Abstract

This study aims to investigate the level of students' vocabulary mastery in comprehending argumentative texts at SMA Persada, Bandar Lampung. A quantitative descriptive research design was employed, involving 41 students as the sample. Data were collected using student worksheets as the primary research instrument. The collected data were analyzed using a one-sample t-test to determine the students' vocabulary proficiency. The findings revealed that students demonstrated good vocabulary mastery in understanding argumentative texts, with a mean score of 80.72. Furthermore, the statistical analysis indicated a highly significant result, with both the one-tailed and two-tailed p-values being less than .001. These findings imply that while students possess an adequate vocabulary foundation for engaging with argumentative texts, continued emphasis on vocabulary development remains essential for deeper critical reading and writing skills. Educators should consider integrating context-based vocabulary instruction within argumentative reading.

**Keywords:** *Vocabulary proficiency; argumentative text; reading comprehension*

### INTRODUCTION

Language is a fundamental medium through which humans communicate, interact, and collaborate. It serves not only as a vehicle for conveying information but also as a means of expressing identity and building social relationships (Gee, 2000). In an increasingly globalized world, the English language has emerged as the dominant lingua franca, facilitating cross-cultural communication in academic, professional, and social contexts (Crystal, 2003). As a result, proficiency in English is now considered a critical asset, especially in international education and the global job market.

Among the key components of language proficiency, vocabulary plays a particularly pivotal role. It serves as the foundation upon which the four primary language skills – listening, speaking, reading, and writing – are built (Nation, 2013). Without an adequate vocabulary base, learners often face difficulties in decoding texts, constructing coherent speech, and engaging in meaningful discourse (Schmitt, 2010). Vocabulary acquisition is not merely a supplementary aspect of language learning but a central determinant of overall communicative competence.

Students should have own knowledge schemes inside directive to find the effective technique (Wael et al. 2025). Therefore, fostering vocabulary development is essential for enabling learners to comprehend complex material, articulate nuanced ideas, and participate effectively in academic and real-world communication.

Vocabulary mastery is a critical component of reading comprehension, as it directly influences a learner's ability to decode, interpret, and construct meaning from written texts. As stated by Wael et al. (2025) Academic achievement depends on one's capacity for reading comprehension. Reading comprehension involves complex cognitive processes, including word recognition, syntactic parsing, and semantic integration, all of which depend heavily on vocabulary knowledge (Perfetti & Stafura, 2014). Research consistently shows a strong correlation between vocabulary size and reading comprehension performance, particularly in second language learners (Qian, 2002; Nation, 2013). When learners possess a rich and diverse vocabulary, they are better equipped to infer meaning from context, recognize word relationships, and engage with texts at a deeper level.

This is especially evident in the comprehension of argumentative texts, which demand a higher level of lexical and cognitive engagement. Argumentative texts aim to persuade by presenting claims supported by evidence and logical reasoning (Toulmin, 2003). Such texts often include domain-specific vocabulary, abstract terminology, evaluative language, and a variety of discourse markers or logical connectors (e.g., "however," "therefore," "consequently") that structure the argument and signal relationships between ideas (Hyland, 1990). Understanding these elements is crucial for readers to follow the line of reasoning, identify the author's stance, and critically evaluate the strength of the arguments presented. Without sufficient vocabulary knowledge, especially of academic and argumentative lexicon, students are likely to misinterpret key concepts or miss the intended persuasive impact of the text (Schleppegrell, 2004). Therefore, vocabulary development should be prioritized in reading instruction, particularly when engaging students with complex genres like argumentative texts, as it underpins their ability to comprehend, analyze, and respond to written arguments effectively.

Despite being a fundamental component of language proficiency, vocabulary acquisition continues to present significant challenges in foreign language learning (Nation, 2013). Lexical competence is essential not only for basic communication but also for academic language tasks, yet many learners struggle with the recognition, comprehension, and contextual application of vocabulary. In addition, (Wael et al. 2025) acquiring vocabulary effectively requires habit implementing basic skills that are applied in everyday life. These challenges become especially pronounced in tasks that require engagement with complex written discourse, such as argumentative texts (Qian, 2002). Research consistently demonstrates a robust correlation between vocabulary size and reading comprehension, with insufficient lexical knowledge often impeding learners' ability to infer meaning, identify rhetorical structures, and engage in higher-order cognitive processes such as analyzing, evaluating, and synthesizing information (Laufer, 1997; Nation & Webb, 2011).

At SMA Persada in Bandar Lampung, preliminary classroom observations revealed that students encountered considerable difficulties when engaging with reading tasks involving argumentative texts. These difficulties appeared to be directly related to their vocabulary knowledge, as students with limited vocabulary struggled to understand key claims, evaluate evidence, and discern the logical flow of arguments. Such findings align with existing literature that emphasizes the pivotal role of vocabulary depth and breadth in processing expository and persuasive texts (Stahl & Nagy, 2006; Cain & Oakhill, 2007). Consequently, there is a pressing need for empirical inquiry into the nature and extent of vocabulary mastery among these students, particularly in relation to their ability to comprehend argumentative texts.

This study, therefore, aims to investigate the vocabulary proficiency of students at SMA Persada and its impact on their comprehension of argumentative reading materials. The findings are expected to inform pedagogical practices by underscoring the necessity of systematic and targeted vocabulary instruction within English as a Foreign Language (EFL) settings. Furthermore, this research intends to contribute to the broader scholarly discourse on the role of vocabulary in fostering critical literacy and academic reading skills (Grabe & Stoller, 2011; Read, 2000).

## METHOD

This study adopted a quantitative research design, which involves the systematic collection, quantification, and statistical analysis of numerical data to objectively investigate relationships and patterns within a defined population (Creswell & Creswell, 2022). The primary objective was to measure the extent of vocabulary mastery among students and examine its relationship to their ability to comprehend argumentative texts. The target population comprised 124 students enrolled at SMA Persada, Bandar Lampung, during the odd semester of the 2024/2025 academic year. To obtain a representative subset of this population, the study employed a purposive sampling technique, selecting 41 students (24 male and 17 female) based on specific inclusion criteria – namely, their prior instructional exposure to argumentative texts. This non-probability sampling method was deemed appropriate, as it facilitated the selection of participants who were pedagogically relevant to the research focus, thereby enhancing internal validity (Cheek & Øby, 2023).

To assess vocabulary mastery in the context of argumentative text comprehension, the study utilized a researcher-developed worksheet as the primary instrument. The worksheet comprised 35 items, including a combination of multiple-choice and translation tasks, designed to evaluate both receptive and productive vocabulary knowledge (Read, 2000). The lexical items were selected based on frequency data and thematic relevance to argumentative discourse, ensuring alignment with the linguistic demands of the genre. The content validity of the instrument was established through expert review by two certified English language education specialists, who evaluated the items for relevance, representativeness, and clarity.

Data were collected over a three-month period, from October to December 2024. Students' responses were scored according to a predetermined rubric and entered into the Statistical Package for the Social Sciences (SPSS) version 26 for analysis. To determine whether students' mean vocabulary scores met the minimum acceptable performance benchmark of 75, a One-Sample T-Test was conducted. This statistical procedure is appropriate for evaluating whether the sample mean significantly differs from a specified population mean, under the assumption of normality (Field, 2024). In addition to inferential analysis, vocabulary mastery levels were interpreted using a standardized scoring classification (see Table 1). This classification was adapted from Brown and Abeywickrama's (2018) widely accepted grading scale for language assessment, allowing for consistent categorization of students' lexical proficiency.

**Table 1.** Classification of Students' Vocabulary Mastery

Score Range	Classification
86–100	Very Good (Grade A)
66–85	Good (Grade B)
46–65	Fair (Grade C)
26–45	Poor (Grade D)

## RESULT AND DISCUSSION

This section presents and interprets the findings regarding the vocabulary mastery of students in comprehending argumentative texts at SMA Persada, Bandar Lampung. A total of 41 students participated in the study. Their vocabulary performance was assessed using a structured worksheet designed to measure lexical knowledge relevant to argumentative discourse. The data were analyzed using a one-sample t-test in SPSS (version 26) to determine whether students' mean vocabulary scores significantly differed from the predefined proficiency benchmark of 75, which represents the minimum threshold for adequate comprehension.

As shown in Table 2, the students achieved a mean vocabulary score of 80.72, with a standard deviation of 6.89, indicating relatively low variability in performance across the sample. The standard error of the mean (SEM) was 1.08, reflecting a precise estimate of the population mean and suggesting internal consistency within the sample group (Field, 2024).

**Table 2.** Descriptive Statistics for Vocabulary Mastery

N	Mean	Std. Deviation	Std. Error Mean
41	80.72	6.89	1.08

To examine whether students' vocabulary mastery significantly surpassed the benchmark value of 75, a one-sample t-test was conducted. The analysis yielded a t-value of 5.29 with 40 degrees of freedom, and the two-tailed p-value was  $< .001$ , indicating a statistically significant result (Table 3). The mean difference of +5.72 demonstrates that students, on average, performed above the minimum proficiency standard, with a 95% confidence interval ranging from 3.54 to 7.90.

**Table 3.** One-Sample T-Test Results

Test Value = 75	t	df	Sig. (1-tailed)	Sig. (2-tailed)	Mean Difference	95% Confidence Interval
Score	5.29	40	$< .001$	$< .001$	5.72	[3.54, 7.90]

The statistical analysis revealed that the students at SMA Persada demonstrated a "Good" level of vocabulary mastery in comprehending argumentative texts, as evidenced by a mean score of 80.72, which corresponds to Grade B within the scoring classification rubric employed in this study (see Table 1). This performance suggests that the students have acquired an adequate lexical foundation to engage with the structural and semantic complexities inherent in argumentative discourse. Such a lexical repertoire likely includes high-frequency academic vocabulary and key genre-specific terms, which are essential for interpreting claims, evaluating evidence, and understanding logical connectors commonly used in argumentative texts.

Comprehension of argumentative texts presents considerable cognitive and linguistic challenges for learners, as it demands not only a broad general vocabulary but also an understanding of abstract, logical, and evaluative language. Kim et al. (2021) found that a content literacy intervention significantly improved students' depth of vocabulary in science and social studies, which in turn enhanced their ability to construct argumentative writing. Complementing this, Christodoulou and Diakidoy (2020) demonstrated that a solid grasp of argument structure facilitates both the comprehension and critical evaluation of argumentative texts, with comprehension playing a key role in the accurate assessment of arguments.

The findings of this study are consistent with a substantial body of research highlighting vocabulary knowledge as a critical predictor of reading comprehension, particularly in linguistically dense and rhetorically complex genres such as argumentative texts (Grabe &

Stoller, 2011; Nation, 2013; Qian, 2002). In such texts, comprehension extends beyond decoding individual words to include the ability to process intricate syntactic constructions, recognize cohesive devices, and interpret nuanced or implicit meanings embedded in evaluative and logical language. A well-developed vocabulary facilitates these processes by allowing learners to access word meanings automatically and allocate more cognitive resources to higher-order comprehension tasks, such as integrating information across clauses and evaluating the strength and coherence of arguments. Consequently, vocabulary depth not only supports literal understanding but also underpins the inferential and analytical skills essential for academic literacy and critical engagement with disciplinary texts.

However, despite the encouraging average performance, it is critical to avoid interpreting this result as an indication that vocabulary instruction can be deprioritized. On the contrary, advanced comprehension skills such as critical evaluation, synthesis of perspectives, and rhetorical analysis, demand a more nuanced level of lexical competence, including the knowledge of low-frequency words, collocations, idiomatic expressions, and discipline-specific terminology (Read, 2000; Nation, 2013). Therefore, vocabulary instruction must move beyond rote memorization or isolated word lists and should instead be integrated within meaningful, context-rich learning activities that reflect authentic academic tasks (Schmitt & Schmitt, 2020; Webb & Nation, 2017).

These findings suggest that while students at SMA Persada possess a solid foundation in general vocabulary knowledge, continued pedagogical emphasis is warranted on strategic and contextualized vocabulary development, particularly tailored to argumentative and other expository genres. Enhancing depth of vocabulary knowledge through genre-based instruction, reading-to-write tasks, and explicit attention to lexical features of academic texts will not only support students' comprehension but also foster critical literacy competencies essential for higher education and informed citizenship.

## CONCLUSION

This study has contributed insights into the role of vocabulary mastery in supporting students' comprehension of argumentative texts at the senior high school level. By employing a quantitative descriptive research design and statistical analysis through a one-sample t-test, the findings confirmed that the participating students at SMA Persada, Bandar Lampung, demonstrated a statistically significant level of vocabulary proficiency above the established benchmark for adequate comprehension. The average score of 80.72, classified as "Good," underscores the students' ability to engage with argumentative discourse, a genre that demands familiarity with abstract, logical, and evaluative language. The significance of this study lies not only in identifying the current level of vocabulary knowledge among students but also in highlighting its pedagogical implications. While a strong foundational vocabulary is evident, the study reinforces the understanding that vocabulary development must be continuous and contextually embedded, particularly to enable students to perform more sophisticated tasks such as analyzing arguments, making inferences, and constructing well-reasoned responses. In a broader context, this study addresses the intersection between language proficiency and academic literacy. As curriculum demands continue to emphasize critical thinking and argumentative writing, vocabulary instruction must evolve accordingly. Educators are thus encouraged to implement instructional strategies that integrate vocabulary learning with authentic, discourse-based reading and writing experiences.

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