

Vocabulary Learning Strategies, Linguistic Knowledge and Reading Comprehension Among Graduating Senior Students

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Abstract

This study examined the vocabulary learning strategies, dictionary-level linguistic knowledge, and reading comprehension of Grade 12 students at Palandok National High School, District of Bacungan, Leon B. Postigo, Zamboanga del Norte. Anchored on vocabulary learning strategy taxonomy, the Vocabulary Levels Test framework, and constructivist views of reading comprehension, the study employed a quantitative-descriptive research design. Total enumeration was used, involving 95 Grade 12 students composed of 49 Humanities and Social Sciences students and 46 Home Economics students specializing in Cookery, Bread, and Pastry Production. Data were gathered using an adopted vocabulary learning strategies questionnaire, the updated Vocabulary Levels Test, and an adopted 45-item reading comprehension test. Findings showed that students often used vocabulary learning strategies, with social strategies obtaining the highest mean and cognitive strategies obtaining the lowest. The students demonstrated stronger performance in high-frequency vocabulary levels but showed increasing difficulty as vocabulary levels became more advanced. All respondents were classified under the frustration level in reading comprehension, indicating a serious comprehension gap. The study concluded that vocabulary learning strategies remain important in improving linguistic knowledge and reading comprehension, especially when students are given sustained exposure to English words and academic reading materials. It recommended the use of a complete system of vocabulary learning strategies, outcomes-based vocabulary activities, and further inferential studies on the relationships among vocabulary learning strategies, linguistic knowledge, and reading comprehension. The study supports SDG 4, SDG 8, and SDG 10 by promoting quality education, employability-related language competence, and inclusive support for learners in rural contexts. Its sustainability impact lies in strengthening educational and socio-economic readiness through practical, classroom-based language interventions.

Keywords: Academic Reading Materials, Dictionary-Level Linguistic Knowledge, Grade 12 Students, Reading Comprehension, Senior High School, Vocabulary Learning Strategies, Vocabulary Levels Test

1. Introduction

Vocabulary learning strategies, linguistic knowledge, and reading comprehension are closely connected components of English language learning. The study focuses on Grade 12 students of Palandok National High School, District of Bacungan, Leon B. Postigo, Zamboanga del Norte, and investigates their use of vocabulary learning strategies, their dictionary-level linguistic knowledge, and their reading comprehension. It responds to continuing concerns about Filipino learners' declining reading performance and the need for practical, sustainable, and non-technology-dependent language learning interventions.

Good practice of vocabulary learning strategies builds good linguistic knowledge, and good linguistic knowledge is a key component of successful reading comprehension. Empirical studies support this relationship in English language learning, reinforcing theoretical models that position vocabulary as central to linguistic comprehension (Vrhovec & Soršak, 2024; Kritsotakis & Morfidi, 2024). Vocabulary learning strategies help students acquire and retain new words through memory, cognitive, metacognitive, determination, and social strategies, combining traditional or deliberate learning with contextual or incidental learning systems (Cao, 2023; Dağdeler, 2023). Oxford and Crookall (1989; as cited by Tao, Hanif, & Lieqin, 2025) analyzed traditional and contextual vocabulary learning techniques that provide long-term classroom benefits. These techniques remain reliable when applied through systematic and sustained instruction (Cao, 2023). Although recent studies have explored gamified vocabulary learning strategies, such approaches may provide only short-term benefits when technology replaces, rather than supplements, instruction, or when students lack resources for sustained use at home (Dağdeler, 2023). In the Philippine setting, the need to strengthen vocabulary learning has become more urgent. The Second Congressional Commission on Education 2026 (Santos et al., 2025) revealed that only four (4) in every 1000 students at Grade 12 can demonstrate skills such as communicating information and analyzing and evaluating data to create or formulate ideas. The same report indicates that nearly half of students are not reading at their respective grade levels.

UNICEF Philippines also highlights life and learning poverty among Filipino learners (Piojo, 2024), while Afzal (2019) emphasized that poor English performance is largely rooted in insufficient vocabulary knowledge.

Vocabulary Learning Strategies (VLS) are essential tools for second language acquisition and support vocabulary growth and linguistic competence. Schmitt's taxonomy classifies VLS into determination, social, memory, cognitive, and metacognitive strategies, which help learners discover and consolidate vocabulary (Almosa, 2023). Studies show that students who actively use VLS improve vocabulary size and reading comprehension, especially when strategies are integrated into structured instruction and contextualized activities (Wen & Naim, 2023). Technology-enhanced approaches, including gamified apps and spaced repetition systems, may also improve engagement and motivation (Dağdelen, 2023; Gilbert et al., 2023). Linguistic knowledge, particularly semantic knowledge, supports the transfer of vocabulary gains to reading comprehension. Vocabulary depth and semantic understanding are linked to better text processing and comprehension (Sparks, 2023; Saleem & Al-Dulaimi, 2020). Dictionary-level knowledge, or receptive vocabulary and denotative semantics, is a fundamental part of linguistic knowledge and a strong predictor of reading comprehension and language proficiency (Vrhovec & Soršak, 2024). Vocabulary mastery begins with high-frequency form-meaning connections, which serve as the foundation for more complex language tasks (Vanbuel, 2025; Nation, 2022). Students who master the 1,000–2,000-word frequency bands demonstrate better comprehension and academic performance than those with limited vocabulary breadth (Webb, Sasao, & Ballance, 2017). Reading comprehension is the ultimate objective of language learning because it involves constructing meaning, identifying main ideas, making inferences, and applying information in new contexts (Prasansaph, 2024). It bridges vocabulary improvement, grammaticality, and overall linguistic development (Narbekova, 2024). Studies confirm that vocabulary breadth, especially dictionary-level word meaning knowledge, predicts comprehension performance (Nation, 2022; Zeng et al., 2025). Students with stronger semantic networks are better able to infer unfamiliar word meanings and understand texts beyond surface-level decoding (Sparks, 2023).

Globally and locally, vocabulary knowledge remains essential to academic success, communication, critical thinking, and employability. Vocabulary knowledge affects reading, writing, speaking, and listening and is important for college entrance examinations, technical certifications, and workplace communication (Santillan & Daenos, 2020). In the Philippines, this concern is urgent because the 2022 Programme for International Student Assessment (PISA) results released in December 2023 placed the Philippines 77th in reading among 81 participating countries. Local studies reflect similar concerns. Cabural and Infantado (2023) found significant reading comprehension difficulty among Grade 10 students in Aloran Trade High School. Viduya and Antonio (2022) reported that Grade 6 pupils reached the independent oral reading level but only the instructional level in silent reading, showing that comprehension mastery remained limited. Royeras and Sumayo (2024) found that Senior High School students in Cotabato had average vocabulary knowledge and poor inferential comprehension, with a significant positive relationship between vocabulary and comprehension. Kilag et al. (2024) also identified vocabulary mastery as a major linguistic barrier to English proficiency despite the K-12 curriculum's emphasis on language development. The present study is situated in Palandok National High School – Senior High School Department, District of Bacungan, Leon B. Postigo, Zamboanga del Norte, where declining language learning performance has been observed. The study focuses on graduating Senior High School students because strong vocabulary and reading comprehension are necessary for higher education, entrance examinations, employment, and lifelong learning.

This study is anchored on Schmitt's (1997) taxonomy of vocabulary learning strategies, which includes determination, social, memory, cognitive, and metacognitive approaches. These strategies support learners in discovering and consolidating new vocabulary through contextual clues, word analysis, spaced review, mnemonic devices, and metacognitive monitoring. Almosa (2023) used Schmitt's taxonomy as an organizing framework for structured classroom or technology-supported vocabulary learning interventions. Determination strategies help learners identify meanings independently (Thiendathong & Sukying, 2021) and are described as "learner control" strategies (Ali, 2020). Social strategies use interaction with teachers, classmates, or more knowledgeable others and may be understood as "teacher control" strategies (Ali, 2020), where teacher management supports learning inside and outside the classroom (Ghalebi, Sadighi, & Bagheri, 2020). Memory strategies connect new words with familiar concepts (Almosa, 2023), while cognitive strategies involve mechanical vocabulary practices such as repetition, note-taking, and highlighting (Almosa, 2023). Metacognitive strategies involve identifying learning opportunities and evaluating vocabulary learning experiences (Almosa, 2025). For linguistic knowledge, the study uses the updated Vocabulary Levels Test (VLT) by Webb, Sasao, and Ballance (as cited by Katushemererwe & Rugyema, 2025), which measures dictionary-type word knowledge across frequency bands. Ha (2022) considered VLT a powerful tool for measuring vocabulary knowledge among EFL learners, while Webb, Sasao, and Ballance (2017) emphasized independent scoring by level to identify areas of strength and weakness. Reading comprehension is framed through constructivism, which views learners as active constructors of meaning who integrate new information with prior knowledge through meaningful and contextualized activities (Efgivia et al., 2021). Thus, the study connects vocabulary learning strategies, dictionary-level linguistic knowledge, and reading comprehension through a framework where vocabulary strategy use is expected to strengthen word knowledge and support comprehension.

Although studies have shown the value of VLS in vocabulary development and comprehension, strategy use does not automatically produce strong vocabulary retention or comprehension gains when applied inconsistently or without explicit instruction (Montante, 2025; Wen & Naim, 2023; Ali, 2020). Critics also note that Schmitt's taxonomy may lack theoretical precision and may involve overlapping strategies, making effectiveness difficult to measure (Aldosari, 2025). Rote memorization and isolated vocabulary drills may also produce only short-term gains without meaningful transfer to reading comprehension (Nazeer et al., 2023). There remains a need for integrated studies that examine traditional vocabulary learning strategies, dictionary-level linguistic knowledge, and reading comprehension among secondary-level students. Existing studies have often focused on morphological awareness (Altheneyan, 2025), syntactic aspects (Asne & Estremera, 2025), or contextual guessing among EFL students (Yildiz, 2023), while fewer studies directly assess students' ability to identify meanings across high-frequency to low-frequency words based on the levels formulated by Webb, Sasao and Balance (as cited by Katushemererwe & Rugyema, 2025). This study addresses that gap by describing the VLS use, linguistic knowledge, and reading comprehension of Grade 12 students at Palandok National High School. It aims to provide evidence-based insights for intervention strategies that can strengthen vocabulary development and reading comprehension, particularly in rural and resource-limited contexts where technology access may be inconsistent.

This study aligns most directly with SDG 4 – Quality Education because it addresses vocabulary learning, linguistic knowledge, and reading comprehension, which are foundational competencies for academic achievement and lifelong learning. By identifying students' current vocabulary learning strategies and comprehension levels, the study can support targeted instructional interventions that improve learning outcomes among Senior High School students. The study also relates to SDG 8 – Decent Work and Economic Growth because vocabulary knowledge and reading comprehension are linked to college readiness, technical certification, workplace communication, and employability (Santillan & Daenos, 2020). Since Senior High School graduates are expected to be prepared for employment or further education, strengthening English language competence supports students' future participation in academic and professional pathways. The study may also support SDG 10 – Reduced Inequalities in an educational sense because it focuses on learners in a rural school context where resource availability, power interruptions, and limited Internet connectivity may affect language learning opportunities. By emphasizing language-based strategies rather than heavy reliance on technology, the study contributes to more inclusive instructional support for students in low-resource settings.

The study contributes to educational sustainability by generating evidence that can guide teachers, curriculum developers, institutions, and policymakers in improving vocabulary instruction and reading comprehension among Senior High School students. It supports instructional sustainability by emphasizing strategies that can be applied consistently in the classroom without depending heavily on digital tools. The study also contributes to socio-economic sustainability because stronger vocabulary knowledge and reading comprehension can improve students' readiness for higher education, employment, and workplace communication. For parents and communities, improved language competence may support students' academic progress and broader life opportunities. For institutions and policymakers, the findings may provide evidence for strengthening language learning programs, designing targeted interventions, and improving the responsiveness of the educational system to current literacy challenges.

2. Material and methods

2.1 Research Design

The study employed a quantitative-descriptive research design to obtain objective and statistically analyzed data on the respondents' vocabulary learning strategies, linguistic knowledge, and reading comprehension. This design was appropriate because the study aimed to describe the students' current language learning situation using adopted questionnaires and standardized instruments from recent studies and reliable sources.

2.2 Locale of the Study

The study was conducted at Palandok National High School, a small barangay high school located in Leon B. Postigo, Zamboanga del Norte. The school belongs to the Division of Zamboanga del Norte, Region IX, Philippines, specifically in the District of Bacungan. The locale was selected because students in the area were observed to have poor reading comprehension and limited vocabulary knowledge based on diagnostic reading assessment results. The researcher also noted that students had limited use of learning strategies to address their language learning difficulties. Since the respondents were graduating Senior High School students preparing for higher education or employment, the study focused on their vocabulary knowledge, vocabulary learning strategies, and reading comprehension as important competencies for academic and career readiness.

2.3 Respondents of the Study

The respondents were Grade 12 students enrolled at Palandok National High School during Academic Year 2025. They came from the school's two Senior High School offerings: the Academic track, represented by the Humanities and Social Sciences strand, and the Technical-Vocational-Livelihood track, represented by Home Economics with specialization in Cookery, Bread, and Pastry Production. The respondents were selected because they were graduating students and because the researcher was assigned to the Senior High School Department, handled Grade 12 courses, and served as the overall English Coordinator responsible for improving students' vocabulary and reading skills. The study included 95 students, composed of 49 Humanities and Social Sciences students and 46 Home Economics students.

2.4 Sample and Sampling Procedure

The study used total enumeration because the entire population of Grade 12 students at Palandok National High School was included. This was appropriate since the school had only two sections of graduating Senior High School students during the academic year covered by the study. The complete enumeration approach allowed the researcher to include all qualified respondents and obtain a full description of the vocabulary learning strategies, linguistic knowledge, and reading comprehension levels of the graduating batch.

2.5 Research Instrument

The study used three instruments. For linguistic knowledge, the updated Vocabulary Levels Test by Webb, Sasao, and Ballance (2017) as cited by Katushemererwe and Rugyema (2025) was used to assess students' dictionary-level word meaning knowledge across the 1000, 2000, 3000, 4000, and 5000 vocabulary levels. Each level contained 30 items, with one point given for every correct answer. The 1000, 2000, and 3000 levels represented high-frequency English words, while the 4000 and 5000 levels represented academic or low-frequency English words. The cut-off score for the 1000, 2000, and 3000 levels was 29 out of 30, while the cut-off score for the 4000 and 5000 levels was 24 out of 30. Scores were interpreted individually per level rather than as a combined score, following Webb, Sasao, and Balance (2017). For reading comprehension, the study used the adopted 45-item Reading Comprehension Practice Test 1 from Test Prep Review by Mometrix (2024). The test contained reading passages on basic Philippine and world history, as well as basic science. Each item had five choices, and each correct answer was given one point. The students' reading comprehension scores were interpreted using the Phil-IRI guidelines, with 80%–100% classified as independent, 59%–79% as instructional, and 58% and below as frustration. For vocabulary learning strategies, the study used an adopted VLS questionnaire by Kafipour and Naveh (2011); Thiendathong & Sukying (2021); and Almosa (2023). The questionnaire measured five classifications of vocabulary learning strategies: memory, social, determination, cognitive, and metacognitive strategies. Responses were rated using a 6-point Likert scale ranging from 0 for never, 1 for rarely, 2 for sometimes, 3 for often, 4 for usually, and 5 for always. The even-numbered scale was used to reduce respondents' tendency to choose a midpoint response.

2.6 Data Gathering Procedure

The data gathering procedure began with the securing of ethical approval and the necessary authorization documents from school authorities. Informed Consent was obtained from the Grade 12 students, while Informed Assent from parents or guardians was secured for respondents below 18 years old. After identifying the respondents through total enumeration, the researcher scheduled the data collection sessions in coordination with school authorities. The questionnaires were administered in a controlled environment under standardized conditions. The respondents were given three hours to complete the instruments and were assured that their responses would remain confidential.

2.7 Data Analysis Techniques

The study used quantitative-descriptive analysis to interpret the gathered data. Frequency count and percentage were used to describe the respondents' profile and the frequency of their vocabulary learning strategy use. Weighted mean was used to describe the respondents' vocabulary learning strategies, dictionary-level linguistic knowledge, and reading comprehension performance. For linguistic knowledge and reading comprehension, percentage scores were computed by dividing the number of correct answers by the total number of items and multiplying the result by 100. The Phil-IRI comprehension standards were used to interpret the scores as frustration, instructional, or independent. For the Vocabulary Levels Test, scores were analyzed by individual vocabulary level rather than by overall score to identify the specific vocabulary levels where students performed well or poorly.

2.8 Ethical Considerations

The researcher secured the required authorization before administering the questionnaires, including approval from the Schools Division Superintendent of DepEd Zamboanga del Norte Division. Since the respondents were Grade 12 students and were categorized as minors, Informed Consent and Student Assent were obtained before participation. Participation was voluntary, and refusal or withdrawal did not affect students' grades, academic standing, school records, or relationship with teachers. The researcher also acknowledged the possibility of test fatigue, anxiety, or discomfort due to the length of the testing process, so respondents were allowed to take appropriate breaks while answering the three research instruments. The collected data were stored securely in compliance with the Data Privacy Act of 2022 (RA 10173). All information was

used only for research purposes, with raw data accessible only to the researcher. Physical records were kept in a sealed container, while digital data were stored in a password-protected flash drive and were to be eliminated after publication, with physical copies to be shredded after three years of storage.

3. Results and Discussion

3.1 Profile of the Respondents

3.1.1 Strand Distribution

The respondents were composed of 95 Grade 12 students. Of this number, 49 students or 51.58% belonged to the Humanities and Social Sciences strand, while 46 students or 48.42% belonged to the Home Economics strand specializing in Cookery, Bread, and Pastry Production. The distribution was nearly equal, although the HumSS strand had a slightly higher representation. This distribution reflects the different literacy orientations of the two strands. HumSS students are generally exposed to language-intensive subjects such as reading, writing, discourse analysis, and critical interpretation, while Home Economics students are more focused on skills-based and performance-driven learning. Previous studies reported that HumSS students had stronger exposure to complex academic texts and explicit reading strategy instruction (Salvalosa et al., 2025; Comique et al., 2025), while TVL students had more limited exposure to extended academic reading and vocabulary development beyond functional texts (Boncillo & Capardo, 2025). This pattern is also consistent with findings that academic-track learners often show stronger reading interest and more frequent use of cognitive and metacognitive reading strategies than vocational-track learners (Mabborang & Balero, 2023; Van Ammel et al., 2020), while TVL learners may experience weaker inferential reading comprehension and oral reading difficulties (Tapit, 2025).

3.2 Vocabulary Learning Strategies

3.2.1 Determination Strategies

The respondents often used determination strategies, with an overall mean of 4.03. The highest-rated strategy was the use of pictures or gestures to guess word meaning, with an average weighted value of 4.25. The lowest-rated strategy was guessing the meaning of a word from context, with an average weighted value of 3.78, although it was still interpreted as often used. The findings show that students frequently try to determine word meanings independently, especially through visual cues. This indicates a degree of learner autonomy in vocabulary learning. However, their lower use of contextual guessing suggests that they may need more explicit instruction in using context clues when reading complex English texts. Determination strategies support independent vocabulary discovery, as these allow learners to use dictionaries, word analysis, and contextual clues without depending heavily on others. This supports the view of Thiendathong and Sukying (2021) that determination strategies promote student independence in vocabulary acquisition. The findings also agree with Wen and Naim (2023), who noted that regular use of vocabulary learning strategies is associated with better vocabulary retention and comprehension. Since Nation (2022) emphasized the importance of word forms in vocabulary knowledge, strengthening students' ability to analyze word forms and context may further improve their linguistic knowledge and reading comprehension.

3.2.2 Social Strategies

The respondents often used social strategies, with an overall mean of 4.92. Asking classmates for the meaning of a word received the highest average weighted value of 4.78, followed closely by asking the teacher to check the definition with 4.76 and talking with native speakers with 4.75. The lowest-rated item was studying the word with classmates, with an average weighted value of 4.05, but it was still interpreted as often used. The results indicate that students commonly rely on peers and teachers when learning unfamiliar vocabulary. This suggests that interaction, clarification, and feedback are important parts of their vocabulary learning process. The finding supports Ghalebi, Sadighi, and Bagheri (2020), who stated that social vocabulary learning strategies help students clarify meaning and develop understanding through interaction with teachers and classmates. It also aligns with Ayana et al. (2024), who found that collaborative vocabulary learning tasks improved vocabulary knowledge and language learning motivation. Although students often seek help from others, the lower rating for studying words with classmates suggests that peer interaction may be more spontaneous than structured. Thus, group discussions, peer teaching, and collaborative vocabulary activities may strengthen vocabulary learning further.

3.2.3 Memory Strategies

The respondents usually used memory strategies, with an overall mean of 4.51. Among the items, using new words in sentences received the highest average weighted value of 4.82. Other frequently used strategies included making personal definitions, connecting words with similar or opposite meanings, studying spelling and sound, and remembering words through parts or affixes. The lowest-rated items were making a mental image of the word's meaning and remembering the word using its word form, both with an average weighted value of 4.15, interpreted as often used. The findings suggest that students use memory-based strategies to connect new vocabulary with prior knowledge, personal experience, sentence use, spelling, sound, and word associations. However, the relatively lower use of mental imagery and grammatical word-form strategies indicates that students may be less inclined to use deeper internal processing techniques. These strategies require stronger cognitive effort because learners need to visualize meanings and understand grammatical functions. Nation (2022)

emphasized that vocabulary learning becomes stronger when students develop rich knowledge of word forms and meaning connections. Therefore, students may benefit from explicit instruction in visualization, word classification, and form-meaning relationships to improve vocabulary retention and linguistic knowledge.

3.2.4 Cognitive Strategies

The respondents often used cognitive strategies, with an overall mean of 3.96. Repeating words aloud many times received the highest average weighted value of 4.79, while taking notes or highlighting new words in class also received a high value of 4.71. However, making lists of new words received 3.57, and keeping a vocabulary notebook received the lowest value of 3.52, both interpreted as sometimes used. The findings show that students frequently rely on repetition and note-taking but are less consistent in organizing vocabulary through word lists or notebooks. Cognitive strategies involve mechanical vocabulary practices such as repetition, writing, and highlighting, which help reinforce new words. This aligns with Almosa (2023), who explained that cognitive vocabulary learning strategies allow students to practice and reinforce vocabulary through repeated exposure. The results also support Gilbert et al. (2023) and Zeng et al. (2025), who found that repeated review of vocabulary in structured activities improves vocabulary knowledge and skills. However, the limited use of vocabulary notebooks suggests that students need more guidance in systematic vocabulary recording and review.

3.2.5 Metacognitive Strategies

The respondents often used metacognitive strategies, with an overall mean of 4.19. Testing oneself with word tests received the highest average weighted value of 4.72, followed by paying attention to English words when someone is speaking the language with 4.62, and studying new words many times with 4.51. The lowest-rated strategy was using English-language media such as songs, movies, and the Internet, with an average weighted value of 3.51, interpreted as sometimes used. The findings indicate that students show awareness of their vocabulary learning process, especially through self-testing, repeated review, and attention to spoken English. This supports Almosa's (2023) explanation that metacognitive strategies help develop independent learners who monitor their learning behavior. The findings also align with Wen and Naim (2023), who noted that frequent self-assessment supports vocabulary retention and language proficiency. The use of repeated review is consistent with Gilbert et al. (2023), who emphasized the role of repeated exposure in long-term vocabulary retention. However, the limited use of English-language media suggests that students may have fewer opportunities for authentic language exposure. Luchini et al. (2025) emphasized that English media can support vocabulary learning by presenting words in meaningful and engaging contexts.

3.3 Summary of Vocabulary Learning Strategy Use

Overall, the respondents often used vocabulary learning strategies, with a grand mean of 4.18. Social strategies obtained the highest mean of 4.92, followed by memory strategies with 4.51, metacognitive strategies with 4.19, determination strategies with 4.03, and cognitive strategies with 3.96. This shows that students frequently use a range of strategies to understand and remember unfamiliar vocabulary, with the strongest reliance on interaction and peer or teacher support. The findings suggest that students are generally familiar with various vocabulary learning strategies, but their use is stronger in social and memory-based approaches than in systematic cognitive practices such as keeping vocabulary notebooks. Schmitt's taxonomy of vocabulary learning strategies emphasizes that students who use multiple strategies are better able to discover word meanings and practice them through interaction. According to Almosa (2023), combining different vocabulary learning strategies allows students to maximize the benefits of vocabulary learning. Moreover, Wen and Naim (2023) noted that frequent use of vocabulary learning strategies supports vocabulary growth, language proficiency, and reading comprehension. These findings indicate that explicit vocabulary instruction may help students improve their lexical knowledge and comprehension further.

3.4 Level of Students' Linguistic Knowledge

The students showed varied levels of dictionary-level linguistic knowledge across vocabulary frequency levels. At the 1000-word level, 60 students or 63.16% reached the independent level, showing that most respondents were familiar with high-frequency vocabulary. At the 2000-word level, only 40 students or 42.11% reached the independent level, while 34 students or 35.79% were at the frustration level. At the 3000-word level, 34 students or 35.79% were at the frustration level, 33 or 34.73% were at the instructional level, and 28 or 29.47% were at the independent level. At the 4000-word level, 41 students or 43.16% were at the frustration level. At the 5000-word level, 61 students or 64.21% were at the frustration level, while only 15 students or 15.79% reached the independent level. The results show that students performed better with high-frequency words but struggled as vocabulary became more advanced. This pattern suggests that students' dictionary-level word knowledge weakens as word frequency decreases. The finding supports Nation (2022), who emphasized that understanding a text depends on the reader's ability to recognize and understand most of the words in it. It also agrees with Zeng et al. (2025), who found that vocabulary breadth strongly predicts reading performance. The findings imply that while students may possess basic vocabulary knowledge, they need stronger support in learning moderately frequent and low-frequency words to improve their linguistic knowledge and comprehension.

3.5 Level of Students' Reading Comprehension

All 95 respondents, or 100%, were classified under the frustration level in reading comprehension. No respondent reached the instructional or independent level. This indicates that the students had difficulty understanding written texts and were unable to meet the expected level of reading comprehension based on the test results. The finding suggests a serious comprehension gap among the respondents. When students lack sufficient vocabulary knowledge, they struggle to understand passages because unfamiliar words limit their ability to interpret meaning. Nation (2022) noted that vocabulary knowledge is the foundation of language learning because students can read and comprehend texts when they understand word meanings. Similarly, Zeng et al. (2025) found that students with limited vocabulary breadth often struggle with academic texts because they cannot recognize many words in reading materials. This result is also consistent with Royeras and Sumayo (2024), who reported that many senior high school students have poor vocabulary knowledge that affects comprehension ability. The finding further reflects the broader Philippine literacy concern shown in international benchmarks such as the Programme for International Student Assessment (PISA), where Filipino students have consistently ranked low in reading performance.

4. Conclusion & Recommendations

The study concluded that vocabulary learning strategies remain relevant in improving students' linguistic knowledge and reading comprehension, particularly when students are frequently exposed to English words. The findings showed that the respondents were almost equally distributed between the HumSS and Home Economics strands, but no clear advantage was observed among HumSS students despite their curriculum's stronger focus on macro-skills. The students showed limited application of vocabulary learning strategies, which affected their ability to plan, monitor, and regulate their own learning processes (Taye & Lodebo, 2026). This limitation was reflected in their difficulties in vocabulary learning and reading comprehension, especially in a rural Filipino context. In line with Almosa (2023), insufficient use of vocabulary learning strategies indicates weak strategic regulation, while inadequate linguistic knowledge may result from limited active engagement and repeated processing of lexical items (Webb, Sasao, & Ballance, 2017). From a constructivist view, comprehension requires students to actively construct meaning by connecting new vocabulary with prior knowledge (Efgivia et al., 2021); however, this process becomes limited when vocabulary learning strategies are underdeveloped.

Based on the findings, further research should examine the relationship between VLS and linguistic knowledge, the relationship between VLS and reading comprehension, and the mediating effects of linguistic knowledge on reading comprehension using inferential statistical analysis. Graduating seniors should also be given sustained exposure to academic reading materials to familiarize them with low-frequency English vocabulary and improve lexical competence. A complete system of vocabulary learning strategies should be utilized to maximize language learning, and students should be actively engaged in outcomes-based activities that emphasize vocabulary learning strategies to enhance linguistic knowledge and reading comprehension. A related study may also be conducted using a test-retest method and localized materials to obtain more accurate information and test results.

The study was limited to 95 graduating Senior High School students of Palandok National High School, Palandok, Leon B. Postigo, Zamboanga del Norte, during Academic Year 2025. It focused only on students from the Humanities and Social Sciences strand and the Home Economics strand specializing in Cookery, Bread, and Pastry Production. The study used a quantitative-descriptive design and measured vocabulary learning strategies, dictionary-level linguistic knowledge, and reading comprehension using the VLS questionnaire, the updated Vocabulary Levels Test by Webb, Sasao, and Ballance (2017) as cited by Katushemerewe and Rugyema (2025), and the adopted 45-item Reading Comprehension Practice Test 1 from Test Prep Review by Mometrix (2024). Since the study relied on descriptive analysis, the relationships among variables and mediating effects were recommended for further inferential investigation.

Compliance with ethical standards

This study complied with institutional ethical standards and secured the necessary approval before data collection. Participation was voluntary, with informed consent and student assent obtained from the Grade 12 respondents and their guardians, as applicable. Confidentiality and data privacy were strictly observed in accordance with the Data Privacy Act of 2012, and all responses were used solely for research purposes. The authors declare no conflict of interest, acknowledge the contributions of all participants and school authorities, and affirm that the copyright and responsibility for the accuracy and integrity of the study belong to the authors.

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