

Vocabulary Learning Strategies and Vocabulary Size of Senior High School ESL Learners

¹Alfa Cielo M. Barut^{ORCID}, ²Robin V. Guillermo

Isabela State University Echague

¹alfacielom.barut30@gmail.com, ²robin.v.guillermo@isu.edu.ph

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Corresponding Email:

alfacielom.barut30@gmail.com

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Abstract. Vocabulary development continues to be one of the most important yet challenging aspects of learning English among Senior High School students in ESL classrooms. While many learners can communicate using basic English, difficulties often arise when they encounter academic and low-frequency vocabulary needed for higher-level reading comprehension and communication. This study examined the vocabulary learning strategies and vocabulary size of Senior High School students in Burgos, Isabela, and used the findings as the basis for the development of a skills worktext in vocabulary learning. The study employed a quantitative descriptive-correlational research design involving 173 Grade 11 and Grade 12 students. Data were collected using a validated Vocabulary Learning Strategies Questionnaire and Vocabulary Size Test. Frequency count, weighted mean, t-test, Pearson-r correlation, and Cronbach's Alpha were utilized in analyzing the gathered data. The findings showed that respondents demonstrated mastery at the 2,000-word and 3,000-word levels, while proficiency gradually declined at the 5,000-word and 10,000-word levels. Students commonly relied on dictionary use, inferencing, and contextual learning strategies. Results further revealed that contextual learning, inferencing, metacognitive regulation, activation, and dictionary strategies were significantly associated with vocabulary size, whereas repetitive memorization strategies showed weaker relationships. The study suggests that students develop vocabulary more effectively when learning involves meaningful context, active engagement, and practical language use. Based on the findings, a five-module skills worktext was developed to strengthen vocabulary learning strategies and improve vocabulary growth among ESL learners.

Introduction

Vocabulary knowledge plays a vital role in second language learning because it directly affects learners' ability to comprehend texts, communicate ideas, and participate effectively in academic tasks. In English as a Second Language (ESL) classrooms, vocabulary development is considered one of the strongest foundations of language proficiency since learners with broader vocabulary knowledge tend to perform better in reading comprehension, writing, listening, and speaking activities. As English continues to function as a global language and a medium of instruction in many academic settings, the need to strengthen students' vocabulary competence has become increasingly important, particularly among Senior High School learners.

Previous studies have consistently emphasized the importance of vocabulary learning strategies in vocabulary acquisition and language development. Schmitt (1997) classified vocabulary learning strategies into categories such as determination, social, memory, cognitive, and metacognitive strategies, while Nation (2001) highlighted the significance of contextual exposure, inferencing, and repeated encounters with words in meaningful situations. Several studies further revealed that learners who actively engage in contextualized learning, inferencing, and dictionary use tend to develop larger vocabularies compared to learners who rely solely on rote memorization (Alahmadi & Foltz, 2020; Uchihara et al., 2025). These findings

suggest that vocabulary growth is strongly influenced not only by exposure to language but also by the strategies learners use in processing and applying vocabulary knowledge.

Existing literature also shows common patterns regarding the relationship between vocabulary size and academic success. Learners with larger vocabulary size demonstrate better comprehension of academic texts and improved communicative competence. Laufer and Nation (1999) noted that mastery of high-frequency vocabulary is necessary for basic communication, while knowledge of low-frequency and academic vocabulary is essential for higher-level comprehension. Similarly, studies conducted among Filipino learners revealed that vocabulary limitations often affect reading comprehension and academic performance, particularly in English-related subjects (Gorpidó & Dela Cruz, 2019).

Despite these established findings, some inconsistencies remain in the literature. While several studies suggest that metacognitive and contextual strategies contribute significantly to vocabulary growth, others indicate that many learners still depend heavily on memorization and translation-based approaches. Moreover, previous studies focused primarily on college students or urban populations, leaving limited evidence regarding Senior High School learners in rural Philippine contexts. Existing instructional materials also tend to emphasize general language instruction rather than strategy-based vocabulary development, creating a gap between learners' vocabulary needs and classroom practices.

This gap highlights the need to examine how Senior High School students develop vocabulary knowledge and what strategies contribute most effectively to vocabulary growth. Understanding the relationship between vocabulary learning strategies and vocabulary size may provide valuable insights for improving ESL instruction and developing contextualized instructional materials. Such information is particularly important in the Philippine educational setting, where learners are expected to engage with increasingly complex academic texts under the K-12 curriculum.

Given the growing academic demands placed on Senior High School students, this study was conducted to examine the vocabulary learning strategies and vocabulary size of learners in Burgos, Isabela. Specifically, the study sought to answer the following questions: (1) What vocabulary learning strategies are commonly used by the respondents? (2) What is the vocabulary size level of the respondents? and (3) Is there a significant relationship between vocabulary learning strategies and vocabulary size?

The primary goal of the study was to examine the relationship between vocabulary learning strategies and vocabulary size among Senior High School students. Specifically, it aimed to identify the strategies frequently used by learners, determine their vocabulary proficiency levels, compare differences according to profile variables, and develop a skills worktext based on the findings of the study.

The succeeding sections of this paper present the methodology used in gathering and analyzing the data, followed by the results and discussion of the findings, and the conclusions and implications derived from the study.

Methodology

Research Design

This study employed a quantitative descriptive-correlational research design to examine the relationship between vocabulary learning strategies and vocabulary size among Senior High School students. The descriptive component was used to identify the vocabulary learning strategies commonly utilized by the respondents and determine their vocabulary proficiency levels, while the correlational component was applied to determine whether significant relationships existed between vocabulary learning strategies and vocabulary size. This design was considered appropriate because the study aimed to describe existing conditions and examine associations among variables without manipulating them.

Participants and Sampling Procedure

The respondents of the study consisted of 173 Senior High School students from selected public secondary schools in Burgos, Isabela. The participants included both Grade 11 and Grade 12 students enrolled during the academic year 2025-2026. Proportionate stratified random sampling was employed to ensure balanced representation according to grade level and sex. This sampling technique was selected to minimize sampling bias and improve the representativeness of the sample. Students officially enrolled in the Senior High School department and willing to participate in the study were included. Learners who were absent during data gathering or failed to complete the instruments were excluded from the final analysis.

Research Instruments

Two research instruments were utilized in gathering the data. The first instrument was a Vocabulary Learning Strategies Questionnaire adapted from Gu (2018) and grounded on the taxonomy of Schmitt (1997). The questionnaire measured students' use of vocabulary learning strategies under the categories of beliefs about vocabulary learning, metacognitive strategies, inferencing, dictionary use, note-taking, rehearsal, encoding, and activation strategies. Responses were measured using a four-point Likert scale.

The second instrument was a Vocabulary Size Test adapted from the framework of Laufer and Nation. The test assessed students' vocabulary knowledge across different word-frequency levels, including the 2,000-word, 3,000-word, 5,000-word, University Word List, and 10,000-word levels.

To ensure validity, the instruments were subjected to expert validation by specialists in English language teaching and research. Reliability testing was also conducted using Cronbach's Alpha, yielding acceptable reliability coefficients, indicating that the instruments were internally consistent and suitable for the study.

Data Gathering Procedure

Prior to data collection, permission to conduct the study was secured from school administrators and concerned authorities. The researcher personally administered the questionnaires and vocabulary tests to the respondents during scheduled class periods. Participants were informed about the purpose of the study, and confidentiality of responses was strictly observed. Participation was voluntary, and respondents were assured that the collected data would be used solely for academic and research purposes.

Ethical Considerations

The study observed ethical standards in conducting educational research. Respondents were informed about the objectives of the study before participation. Informed consent was secured, and anonymity was maintained by excluding identifying information from the data collection process. The respondents were also given the freedom to withdraw from participation at any stage of the study without penalty.

Data Analysis

The gathered data were encoded and analyzed using Statistical Package for the Social Sciences (SPSS) Version 27. Frequency counts, percentages, weighted mean, and standard interpretation scales were used to describe the respondents' profile, vocabulary learning strategies, and vocabulary size levels. Independent samples t-test was utilized to determine significant differences when respondents were grouped according to sex and grade level. Pearson-r correlation analysis was employed to determine the relationship between vocabulary learning strategies and vocabulary size. All statistical analyses were tested at the 0.05 level of significance ($p < 0.05$). **Results and Discussion**

The findings of this study revealed that instructional supervision at Minglanilla Central Elementary School was consistently practiced and positively perceived by teachers. Teachers reported that activities such as classroom observation, feedback, and mentoring were regularly implemented and helpful in enhancing their instructional practices and overall performance (Garcia & Weiss, 2021; OECD, 2022). The respondents also demonstrated a high level of teaching performance, excelling in lesson delivery, classroom management, and learner engagement, reflecting the effectiveness of supervision as a professional support mechanism.

Furthermore, correlational analysis indicated a significant positive relationship between instructional supervision and teachers' teaching performance, suggesting that consistent and supportive supervision contributes directly to improved instructional practices. These results align with findings that collaborative and constructive supervision promotes teacher growth and effectiveness, particularly in delivering learner-centered instruction (Sergiovanni & Starratt, 2021; Li et al., 2022). In the Philippine context, this underscores the importance of strengthening supervisory mechanisms to meet diverse learner needs and maintain high-quality education (DepEd, 2023).

The results of this study indicate that instructional supervision plays a significant role in enhancing teachers' teaching performance at Minglanilla Central Elementary School. The consistent implementation of supervision activities, such as classroom observation, feedback, and mentoring, was positively perceived by teachers and contributed to high levels of lesson delivery, classroom management, and learner engagement. These findings align with research showing that effective supervision improves instructional practices and overall performance (Garcia & Weiss, 2021; OECD, 2022).

In the Philippine context, the study underscores the importance of strengthening instructional supervision to address diverse learner needs and maintain quality education in basic schools (DepEd, 2023). When supervision is collaborative and supportive, it fosters professional growth and encourages teachers to adopt more engaging, learner-centered approaches (Sergiovanni & Starratt, 2021; Li et al., 2022). Overall, these results highlight that strategic and consistent supervision is a key factor in promoting teacher effectiveness and improving student outcomes.

Results and Discussion

Vocabulary Learning Strategies of the Respondents

The findings showed that the respondents generally practiced vocabulary learning strategies at an applicable level, with an overall mean of 2.95. Among the different strategies, Learning through Use received the highest mean score (M = 3.28), interpreted as Extremely Applicable. This was followed by Selective Attention (M = 3.13), Dictionary Strategies (M = 3.09), Inferencing Strategies (M = 3.07), and Oral Repetition (M = 3.07). On the other hand, Self-initiation strategies obtained the lowest mean score (M = 2.46), interpreted only as Somehow Applicable.

The highest-rated indicators were related to contextual learning. Respondents strongly agreed that the basic knowledge of a word includes spelling, sound, meaning, and usage (M = 3.45), and that word meanings can be learned through reading (M = 3.33). These findings suggest that students learn vocabulary more effectively when words are encountered in meaningful contexts rather than through isolated memorization. The results indicate that learners value understanding and practical use of vocabulary, not simply remembering translations.

These findings support the work of Nation (2001) and Schmitt (1997), who emphasized that vocabulary is acquired more effectively when learners encounter words repeatedly in authentic contexts. Likewise, Alonzo and Villanueva (2020) explained that contextualized exposure improves both vocabulary retention and reading comprehension. The present findings therefore suggest that Senior High School learners are becoming more dependent on communicative and contextual approaches in vocabulary learning.

Despite this shift toward contextual learning, traditional memorization strategies still remained evident among the respondents. Memorization and repetition strategies continued to receive applicable ratings, showing that learners still rely on familiar methods such as repetition, word lists, and translation. This may reflect the influence of classroom practices and examination-based learning commonly observed in Philippine ESL settings. While students recognize the importance of contextual learning, rote memorization still serves as a foundation for vocabulary development.

The relatively low mean score in self-initiation strategies also suggests that many learners are still dependent on teacher guidance. Students showed weaker tendencies to study vocabulary independently or explore additional reading materials outside classroom requirements. This finding supports the study of Gorpido and Dela Cruz (2019), who found that Filipino learners often demonstrate limited autonomous learning behaviors despite being aware of effective vocabulary strategies. Overall, the results highlight the importance of strengthening learner autonomy together with contextual vocabulary instruction. Teachers may encourage students to become more independent by exposing them to extensive reading activities, reflective vocabulary tasks, and self-monitoring strategies. Such approaches can help learners move from passive memorization toward more meaningful and strategic vocabulary learning.

It should also be considered that the respondents came only from selected Senior High Schools in Burgos, Isabela. Because of this, the findings may not fully represent all Filipino ESL learners. Future studies may explore how factors such as digital exposure, socioeconomic background, and access to English resources affect vocabulary learning strategies in different educational contexts.

Vocabulary Size of the Respondents

The results further revealed that respondents demonstrated strong mastery at lower vocabulary levels, but their proficiency gradually declined as vocabulary demands became more advanced. At the 2,000-word level, 80.90% of the respondents achieved mastery, while 81.50% demonstrated mastery at the 3,000-word level. However, mastery rates decreased at the higher levels, with only 73.40% mastering the 5,000-word level, 59.00% mastering the University Word List level, and 27.70% reaching mastery at the 10,000-word level.

The overall vocabulary size results showed that most respondents belonged to the University Word List level (43.9%) and the 10,000-word level (35.3%), both interpreted as Upper Intermediate proficiency. None of the respondents fell below the 2,000-word level, which indicates that all participants possessed at least basic English vocabulary proficiency.

These findings suggest that learners already possess sufficient high-frequency vocabulary needed for daily communication and general academic tasks. However, the noticeable decline in mastery at higher levels indicates that students experience difficulty when dealing with specialized academic and low-frequency vocabulary. This pattern reflects the concept of the “lexical threshold” discussed by Laufer and Nation (1999), where learners begin to struggle once vocabulary demands exceed their current lexical knowledge.

The findings are consistent with previous studies showing that learners often master common vocabulary more easily than academic and technical vocabulary. Nation and Webb (2020) explained that reaching the 10,000-word level usually requires continuous exposure to authentic texts and advanced language input. The low mastery rate at this level suggests that many students may still have limited opportunities to encounter and practice advanced vocabulary in meaningful situations.

These findings emphasize the need for vocabulary instruction that gradually introduces students to academic and low-frequency words through contextualized learning activities. Exposure to authentic reading materials, academic writing tasks, and extensive reading programs may help learners strengthen their vocabulary beyond the basic and intermediate levels. Activities focusing on inferencing, contextual analysis, and morphological awareness may also support vocabulary growth.

One limitation of the study is that vocabulary size was measured mainly through receptive vocabulary assessment. The productive use of vocabulary in speaking and writing was not directly examined. Future studies may therefore investigate the relationship between receptive and productive vocabulary knowledge among Filipino ESL learners. Longitudinal research may also explore how vocabulary size develops over time and how digital learning environments influence lexical growth.

Differences in Vocabulary Learning Strategies According to Profile Variables

When respondents were grouped according to sex, only a few vocabulary learning strategies showed significant differences. Female respondents obtained significantly higher mean scores in reading-based vocabulary learning, dictionary use, and bilingual note-taking strategies compared to male respondents. Significant differences were specifically observed in learning vocabulary through native-language meanings, learning through reading, repeated dictionary consultation, and writing both English and native-language meanings in notes.

However, most vocabulary learning strategies showed no significant differences according to sex. Both male and female respondents demonstrated similar preferences for contextual learning, inferencing, rehearsal, and activation strategies. These findings suggest that vocabulary learning behaviors are influenced more by learning experiences and classroom exposure rather than by sex differences alone.

Similarly, when respondents were grouped according to grade level, only selected strategies showed significant differences. Grade 12 respondents demonstrated stronger use of inferencing through parts of speech, note-taking based on personal interest, spelling memorization, visual coding, and word-structure analysis compared to Grade 11 respondents. These findings suggest that older learners may gradually adopt more detailed and strategic approaches as they encounter more demanding academic vocabulary.

The findings support the work of Gu and Johnson (1996), who explained that more experienced learners tend to use more strategic and self-regulated vocabulary learning behaviors. The stronger use of inferencing and structural analysis among Grade 12 students may be connected to greater academic exposure and increased encounters with unfamiliar words in academic texts.

Despite these differences, the absence of widespread significant variation across profile variables suggests that vocabulary learning strategies among the respondents remain generally similar regardless of sex or grade level. This may be due to similarities in curriculum content, teaching methods, and learning environments across the participating schools.

The findings imply that vocabulary instruction should focus on strengthening higher-order strategies such as inferencing, contextual encoding, and learner autonomy for all students. Teachers may also provide differentiated activities that encourage deeper vocabulary processing and independent learning behaviors among learners with varying proficiency levels.

Relationship Between Vocabulary Learning Strategies and Vocabulary Size

The Pearson-r correlation analysis revealed that several vocabulary learning strategies were significantly related to vocabulary size. The strongest relationships were found in inferencing and contextual learning strategies, particularly checking whether guessed meanings fit the paragraph ($r = 0.46, p = 0.00$), paying attention to expressions and collocations ($r = 0.40, p = 0.00$), understanding spelling, sound, meaning, and usage ($r = 0.40, p = 0.00$), and looking for additional readings beyond textbooks ($r = 0.40, p = 0.00$).

Dictionary strategies also showed consistently significant positive relationships with vocabulary size. Likewise, activation strategies such as using new words in real-life situations and creating personal sentences demonstrated positive associations with vocabulary growth. These findings suggest that learners develop larger vocabularies when they actively interact with words in meaningful and practical contexts.

In contrast, purely mechanical rehearsal strategies such as repeated spelling memorization, copying words repeatedly, and translation-based writing showed weak or non-significant relationships with vocabulary size. This indicates that memorization alone may not be enough to produce long-term vocabulary growth unless combined with deeper cognitive processing and contextual understanding.

The findings strongly support contemporary theories of vocabulary acquisition emphasizing active engagement and contextual learning. Nassaji (2003) explained that inferencing improves vocabulary acquisition because learners analyze contextual clues and grammatical structures while processing unfamiliar words. Similarly, Uchihara et al. (2025) found that dictionary use and contextual exposure significantly contribute to vocabulary growth by helping learners understand semantic meaning and word usage more clearly.

The present study therefore highlights the importance of deeper cognitive involvement in vocabulary learning. Learners who actively analyze, apply, and contextualize vocabulary tend to demonstrate larger vocabulary sizes compared to those who rely mainly on repetitive memorization. These findings reinforce the idea that vocabulary development becomes more effective when learners participate actively in the learning process.

The results also have important implications for ESL instruction. Vocabulary teaching should move beyond simple memorization drills and instead include activities that encourage inferencing, contextual analysis, morphological awareness, and active language use. Strategy-based instruction may help learners improve both vocabulary retention and academic language proficiency.

Since the study used correlational analysis, causal relationships cannot be fully established. Although significant relationships were identified, it cannot be concluded that vocabulary learning strategies alone directly cause vocabulary growth. Future experimental and longitudinal studies may further investigate how specific instructional interventions influence vocabulary development over time.

Conclusion and Recommendations

This study explored the vocabulary learning strategies and vocabulary size of Senior High School students in the ESL classroom. The findings showed that students commonly used strategies such as contextual learning, inferencing, dictionary use, and activation in learning vocabulary. The results also revealed that most respondents had already mastered the 2,000-word and 3,000-word levels, but their proficiency gradually decreased as vocabulary became more advanced, particularly at the 10,000-word level. In addition, only a few vocabulary learning strategies differed according to sex and grade level. Most importantly, the study confirmed that several vocabulary learning strategies were significantly related to vocabulary size, especially strategies involving contextual understanding, active language use, and independent learning.

The findings support existing theories on vocabulary acquisition which emphasize that learners develop vocabulary more effectively when they actively engage with words in meaningful contexts. The study supports the ideas of Schmitt (1997) and Nation (2001), who explained that vocabulary learning becomes more successful when learners apply strategies such as inferencing, contextual analysis, and real-life language use instead of relying only on memorization. The results also suggest that Filipino Senior High School learners are gradually shifting toward more communicative and practical approaches to vocabulary learning.

The study has several practical implications for teachers, curriculum planners, and language educators. Since contextual learning, dictionary consultation, and activation strategies were strongly associated with vocabulary growth, teachers should provide more opportunities for students to encounter and use vocabulary in authentic situations. Activities such as extensive reading, role-playing, vocabulary journals, contextual guessing exercises, and collaborative discussions may help

students improve their lexical knowledge more effectively. The findings also served as the basis for developing the proposed Skills Worktext, which may be used as a supplementary material to strengthen vocabulary learning strategies among ESL learners.

Although the study produced meaningful findings, several limitations should also be recognized. The respondents were limited to selected Senior High School students in Burgos, Isabela, which means the findings may not fully represent all Filipino ESL learners. The study also relied on self-reported responses, which may not always reflect students' actual learning behaviors. Furthermore, the study focused mainly on receptive vocabulary knowledge and did not directly measure productive vocabulary skills such as speaking and writing. However, these limitations may serve as opportunities for future refinement and further investigation.

Future studies may involve a larger and more diverse group of participants from different schools or regions to provide broader insights into vocabulary learning among Filipino learners. Researchers may also conduct experimental studies to determine whether strategy-based vocabulary instruction can significantly improve vocabulary size over time. In addition, future research may examine how productive vocabulary skills, digital learning environments, and classroom exposure influence vocabulary development. Longitudinal studies may also help explain how vocabulary learning strategies change as learners progress through different educational levels.

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Competing Interests Statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this article.

Data Availability Statement

Data sharing is not applicable to this article as no new data were created or analyzed in this study; all data used were obtained from previously published sources as cited in the reference list.

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Appendices

No appendices are attached to this study.