

STUDENTS' BREADTH AND DEPTH OF VOCABULARY KNOWLEDGE IN RELATION TO WRITING PROFICIENCY: BASIS FOR AN INTERVENTION PROGRAM

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Abstract

The study, "Students' Breadth and Depth of Vocabulary Knowledge in Relation to Writing Proficiency: Basis for an Enhancement Program," examined the relationship between vocabulary knowledge and writing proficiency among Grade 11 students at PHINMA Araullo University. Specifically, it explored how vocabulary breadth and depth are associated with the student's writing ability with organization, coherence, cohesion, and mechanics. The study also investigated how the student profile variables, sex, strand, academic performance, and favorite subject, relate to vocabulary performance and writing skills. A descriptive-correlational design was employed, involving 228 Senior High School students enrolled in the Reading and Writing Skills subject during the second semester of the school year 2024–2025. The data were collected using standardized vocabulary assessments and a writing proficiency rubric. The results showed that the students had moderate vocabulary breadth and depth levels. The writing proficiency was rated excellent in organization and proficient in coherence, cohesion, and mechanics. Significant positive correlations were found between vocabulary breadth and depth and writing proficiency. The academic strand, general average, and favorite subject were also significantly associated with vocabulary and writing scores, while sex had no statistically significant influence. Based on these findings, the WriteVocab Plus Enhancement Program was developed. The program includes eight integrated components: Word Vault Journaling, Contextual Essay Writing, Read-Reflect-Respond, Peer Writing Clinics, Lexis Game Hour, E-Portfolio Compilation, Language Ladder Challenges, and Vocabulary Episodes Vodcast. These components are designed to align with PHINMA Araullo University's blended learning modality and aim to strengthen vocabulary acquisition and writing performance through consistent, engaging, and reflective practices. The study recommends the implementation of the WriteVocab Plus Program in the Reading and Writing classes and the regular monitoring of student progress. It also suggests adapting and testing the program across other strands and school contexts to validate its broader applicability. The findings highlight the importance of integrating vocabulary instruction into writing tasks to promote student success in academic literacy.

Keywords: breadth; depth; vocabulary knowledge; organization; coherence; cohesion; mechanics of writing; WriteVocab Plus

1. Introduction

Vocabulary is more than a collection of words; it is the foundation of effective communication and academic success. The studies affirm that the breadth (number of words known) and depth (understanding and proper use) of vocabulary significantly influence a student's ability to comprehend texts and express ideas

clearly. Nation and Alexander (2018) highlight that strong vocabulary skills are critical predictors of writing proficiency and language performance across all academic tasks.

In the Philippines, vocabulary knowledge is particularly critical for Junior and Senior High School students. It equips them to meet the language expectations of the Department of Education (DepEd) and to perform well in core academic subjects such as Practical Research 1 and 2, Reading and Writing Skills, and English for Academic and Professional Purposes. These subjects form the foundation for success in higher education.

The significance of vocabulary extends directly to writing proficiency. Alexander (2018) identifies three primary reasons vocabulary is crucial to writing success: first, a solid vocabulary base enhances comprehension, allowing students to interpret texts accurately; second, vocabulary forms the core of all language skills; listening, speaking, reading, and writing; third, vocabulary expansion strengthens students' intellectual and social development. Specifically, vocabulary breadth, the number of words known and vocabulary depth, the understanding of word meanings and usage play key roles in producing clear, organized, and coherent writing.

Writing is central to academic performance. The students are assessed regularly through essays, research papers, and written exams, depending on their ability to use language effectively. A strong vocabulary contributes to well-structured and easily understood writing that accurately conveys meaning without unnecessary verbosity.

In recent research, Kılıç (2019) reported that vocabulary knowledge significantly explains variance in writing proficiency. Samsidar et al. (2022) found a positive correlation between vocabulary skills and writing performance, noting that students with a richer vocabulary use cohesive devices more effectively and express ideas with greater clarity. These findings underscore the importance of building vocabulary to support academic writing.

The researcher is a faculty II member at the PHINMA Araullo University and the subject head for Reading and Writing Skills across campuses. It makes the researcher well-qualified to conduct this study. Since the researcher regularly works with Grade 11 students from all strands in online and face-to-face classes, there is direct knowledge of their vocabulary use, sentence construction, and writing difficulties. This close involvement allows the researcher to observe how vocabulary affects writing performance. Because of this role and experience, the researcher is in the best position to study this relationship and to develop a program that can help improve students' writing through better vocabulary instruction.

2. Review of Related Literature

Vocabulary Knowledge

Vocabulary plays a fundamental role in language learning. A well-developed vocabulary enables individuals to express thoughts, emotions, and ideas clearly, while limited vocabulary can hinder comprehension and writing fluency. Vocabulary knowledge refers to understanding word meanings, which includes two key dimensions: vocabulary breadth, the number of words known, and vocabulary depth, or the understanding of word meanings, nuances, and relationships. Both are crucial for reading and writing success in complementary ways.

Sukying (2023), in a study on postgraduate students, examined how vocabulary size and depth contributed to second language (L2) writing performance. Findings showed that both vocabulary dimensions positively correlated with writing outcomes, with vocabulary depth having a slightly more substantial predictive effect. In understanding word associations and usage significantly enhances writing proficiency.

In a similar study, Boudribila (2019) investigated the relationship between vocabulary size and writing ability among Moroccan EFL students. Using vocabulary and writing tests administered to 464 learners, the

results showed a significant positive correlation, students with larger vocabularies produced higher-quality written outputs. This emphasizes the importance of vocabulary breadth in supporting effective writing.

Likewise, Kılıç (2019) explored how vocabulary knowledge affected writing and speaking performance among Turkish EFL students. The study confirmed that vocabulary size and depth significantly predicted learners' performance in both areas, underscoring the crucial role of vocabulary in broader language proficiency.

These studies collectively affirm that strong vocabulary knowledge both in breadth and depth, is a key driver of writing competence. The tools such as the Vocabulary Size Test (VST) help assess these dimensions and provide teachers with data to inform targeted instruction. However, while these foreign studies present valuable insights, it is also important to integrate local perspectives into the Philippine educational context.

Breadth of Vocabulary Knowledge

According to the Academy for Science and Instruction (n.d.), vocabulary breadth refers to the total number of words a person has encountered or is familiar with, even if not actively used. These words form the receptive vocabulary, while those spoken or written form the expressive vocabulary. Although not all known words are used frequently, recognizing them contributes significantly to comprehension and overall language processing.

Vocabulary breadth is important in both regular and irregular word reading and writing. For regular words, a vast vocabulary allows learners to anticipate spelling patterns and read more fluently. For irregular words, students apply strategies such as correcting mispronunciations or recognizing spelling variations, which enhances reading accuracy.

According to the Orton Gillingham Online Academy (2019), vocabulary breadth means having at least surface-level knowledge of many words. For example, a person may recognize the word *perspicuous* and know it relates to "seeing" or "looking" but may not be confident using it in speech or writing. It reflects surface-level understanding, highlighting the importance of strengthening vocabulary knowledge's quantity and quality. According to InferCabulary (2015), this type of understanding still contributes to communication but may not fully support precise language use in academic contexts.

Tools for Measuring Vocabulary Size

One of the most widely recognized tools for measuring vocabulary breadth is the Vocabulary Size Test (VST), developed by Nation and Beglar (2007). It estimates how many word families a learner knows, particularly within academic and general English contexts. The test has been found to correlate strongly with students' reading comprehension and writing proficiency. Schmitt, Jiang, and Grabe (2021) observed that students with higher VST scores performed significantly better in academic writing tasks. Similarly, Laufer and Nation emphasized that vocabulary size influences the ability to construct coherent and structured written texts.

The VST is based on frequency word lists derived from the British National Corpus (BNC) and includes 10 test items per 1,000-word level, covering up to 20,000-word families. A version targeting the first 14,000-word families is recommended for non-native speakers above 12. It is available online for free (e.g., VocabularySize.com and Compleat Lexical Tutor) and offers bilingual options, which are beneficial for lower-proficiency learners.

Beglar (2020) validated the VST using Rasch analysis and confirmed its reliability ($\alpha \approx 0.96$), single-factor structure, and effectiveness in distinguishing learners across proficiency levels. The test meets key standards for educational assessments, it is easy to score, interprets results clearly, and features unambiguous items. Nguyen (2021) further noted that learners may recognize low-frequency words due to personal

interests, exposure to technical fields, or loanwords, which supports the importance of testing across all frequency bands.

These assessments do not have norm or standard scores, so teachers must administer them to assess growth. There are three kinds of vocabulary tests.

1. The Vocabulary Size Test measures total vocabulary size (i.e., how many words someone knows).
2. The Vocabulary Levels Test measures knowledge of particular frequency levels of words (e.g., the first 1,000 and second 1,000 words).
3. The 1,000 and 2,000 level tests are based on Michael West's A General Service List of English Words. They help test low-proficiency students, and the bilingual versions ensure they do not struggle with English definitions.

In addition to the VST, other tools include the Vocabulary Levels Test, which assesses knowledge of specific word frequency bands (e.g., the first 1,000 or 2,000 words), and Michael West's General Service List-based tests, designed for low-proficiency students and available in bilingual formats.

The unit of measurement in these tests is the word family, a concept supported by research showing that learners can infer unfamiliar words from known family members (Nagy et al., 2019; Bertram, Laine, & Virkkala, 2020). This choice significantly affects vocabulary counts, as a one-word family can include several forms, such as walk, walking, and walker. Thus, the VST provides a practical and pedagogically sound method to assess vocabulary breadth and guide vocabulary-focused instruction.

Depth of Vocabulary Knowledge

Depth of vocabulary knowledge refers to a student's understanding of word meanings beyond simple recognition. It includes knowledge of word associations, collocations, and connotations, essential for accurate and effective language use. A deeper vocabulary enables students to select words with precise meanings, use them in grammatically appropriate contexts, and establish relationships between words. Unlike vocabulary breadth, which focuses on how many words a student knows, depth emphasizes how well they understand those words, including their synonyms, antonyms, multiple meanings, and usage in different contexts. The research suggests that students with a more profound vocabulary knowledge produce more coherent, cohesive, and sophisticated writing, as they can use it more accurately and with greater nuance (Schmitt, 2015).

A key tool for assessing vocabulary depth is the Word Association Test (WAT). The WAT evaluates how well students understand word relationships by requiring them to identify semantically or collocationally related words to a given target word. According to Qian (2016) highlights that vocabulary depth, as measured by WAT, is a strong predictor of writing proficiency, as it reflects a student's ability to choose words that fit specific contexts.

Similarly, Schoonen et al. (2018) found that students with a higher vocabulary knowledge demonstrated greater lexical variety and accuracy in their written compositions. The WAT provides valuable insights into students' ability to use words meaningfully, allowing teachers to design targeted enhancements that strengthen vocabulary depth and writing skills.

The more deeply known words will have richer entries and more connections to other words in the mental lexicon (e.g., synonyms, antonyms, or words that occur in similar contexts). They will be words a person can actively use.

Vocabulary depth contributes to reading and writing proficiency. The words are stored in an interconnected network in our minds. It means that when we recognize a word (e.g., 'fox'), we activate both knowledge about that individual word and knowledge of related words, concepts, facts, and memories that we have connected to that word (e.g., 'hunt,' 'wild,' 'red,' 'sly as a fox'). This rich, interconnected knowledge base (our vocabulary depth) drives good reading comprehension.

Depth of vocabulary refers to a "robust" or strong, healthy knowledge of a word. It involves knowing the "many different facets of words," including how it sounds (phonology), the written form (orthography), other forms of the word (morphology), its grammatical use (syntax), meanings, and how it relates to other words (semantics) and how to convey meaning to others (pragmatics).

Having broad and deep knowledge of a word means that when students write and read the word, they will fully understand it. There is a need to work towards this in the classroom and language therapy. Completing worksheets, taking quizzes, and using vocabulary words in a sentence do not always go far enough to help our students with language-based learning difficulties tap into more profound vocabulary knowledge.

In order to develop students' understanding of word associations, collocations, and connotations, teachers can help them produce more precise, varied, and contextually appropriate writing. Instructional strategies such as explicit vocabulary teaching, lexical field exercises, and contextualized word study have enhanced vocabulary depth (Nation, 2022). Ultimately, nurturing both breadth and depth of vocabulary knowledge is crucial in improving student's writing proficiency and overall language competence.

Role of Vocabulary in Writing Proficiency

Vocabulary plays a fundamental role in writing proficiency, as it directly influences a student's ability to organize ideas, maintain coherence and cohesion, and apply proper writing mechanics. A limited vocabulary can lead to repetitive word choices, vague expressions, and difficulty logically structuring sentences, making it harder for students to convey their thoughts effectively. Research has shown that students with poor lexical resources struggle with organization, as they lack the necessary words to structure their arguments and transitions smoothly (Crossley et al., 2016).

Additionally, inadequate vocabulary depth affects coherence and cohesion, leading to disjointed sentences and unclear relationships between ideas. Without sufficient word knowledge, students may also misuse words, resulting in grammatical errors and poor mechanics, further reducing the overall quality of their writing (Zhang, 2019).

According to Meyer Ray (2017), organization plays a crucial role in academic and professional writing, allowing ideas to be developed systematically. A clear structure helps prevent misunderstandings and improves overall readability. Similarly, Flower Hayes (2019) emphasizes that organized writing reflects critical thinking and cognitive clarity, enabling writers to convey arguments persuasively and cohesively.

Cohesion is an important feature of academic writing. It can help ensure that writing coheres or 'sticks together,' making it easier for the reader to follow the main ideas in your essay or report. One can achieve good cohesion by paying attention to five important features. The first of these is repeated words. The second key feature is reference words. The third one is transition signals. The fourth is substitution. The final important aspect is the ellipsis.

The words "cohesion" and "coherence" are often used with a similar meaning, which relates to how a text joins together to make a unified whole. Although they are similar, they are not the same. Cohesion relates to the micro level of the text, i.e., the words and sentences and how they join together. Coherence, in contrast, relates to the organization and connection of ideas and whether the reader can understand them, and as such, is concerned with the macro level features of a text, such as topic sentences, thesis statement,

Mechanics of writing refers to the technical aspects of written communication, including spelling, punctuation, and capitalization. Proper writing mechanics ensures clarity, readability, and professionalism in any written work. According to Lunsford Connors (2019), writing mechanics are the foundation for effective communication, as punctuation or spelling errors can change a sentence's meaning and confuse readers. For example, the sentence "Let us eat, grandma" differs significantly from "Let us eat, Grandma!" simply due to the placement of a comma.

According to Kyle and Crossley (2018) found that students with greater lexical diversity demonstrated stronger writing fluency, as they could use various words to develop their ideas effectively. Similarly, Yan et al. (2020) emphasized that lexical richness—measured by word range and sophistication—strongly predicted writing quality in second-language students. Their study revealed that students who employed a wider range of words wrote more cohesive and well-structured essays. Furthermore, Baba (2018) noted that lexical richness contributes to fluency by reducing reliance on basic vocabulary, allowing students to write more precisely and deeply.

The various methods are used to evaluate writing proficiency through writing tasks. According to Weigle (2018), rubrics provide a structured framework for assessing organization, coherence, and mechanics, ensuring consistency in evaluation. Meanwhile, Bacha (2020) highlights the effectiveness of timed essay tests in measuring students' ability to organize thoughts under pressure. Advances in technology have also introduced Automated Writing Evaluation (AWE) systems, which, as noted by Li et al. (2021), offer immediate feedback on grammar and coherence. Despite these methods, writing assessments remains challenging due to their subjective nature, requiring multiple assessment approaches for a more holistic evaluation (Graham & Perin, 2020).

These findings underscore the critical role of vocabulary knowledge in writing proficiency. Without a strong vocabulary base, students struggle with clarity, logical progression, and grammatical accuracy, all essential for effective written communication. As a result, enhancing both the breadth and depth of vocabulary should be a priority in language instruction to improve students' writing performance.

Relationship Between Vocabulary Knowledge and Writing Proficiency

Vocabulary breadth, which refers to the number of words a student knows, allows students to express a broader range of ideas. In contrast, vocabulary depth, which pertains to understanding word meanings, associations, and usage, ensures precise and contextually appropriate word choices. These two dimensions of vocabulary complement each other in enhancing students' ability to write effectively.

Teng (2015) investigated the relationship between vocabulary breadth, depth, and writing proficiency among second-language students. The study found that both aspects of vocabulary knowledge significantly predicted students' writing performance, particularly in organization, coherence, cohesion, and mechanics. Teng emphasized that a strong vocabulary foundation enables students to use a variety of sentence structures, appropriate transitions, and precise word choices, leading to more transparent and cohesive writing.

According to Zhang (2019), students with a well-developed vocabulary showed higher levels of syntactic complexity and text cohesion in their writing. The study concluded that depth of vocabulary knowledge is particularly crucial in ensuring logical flow and precise word selection, reducing ambiguity, and enhancing readability.

In writing, a rich vocabulary enables students to vary their word choices, avoid redundancy, and articulate ideas with precision. Studies have shown that students with a broader vocabulary tend to write more fluently and effectively, as they can select appropriate words to convey meaning accurately (Laufer, 2019).

On the other hand, a limited vocabulary often results in vague expressions, repetitive phrasing, and difficulty in organizing thoughts, ultimately affecting the overall quality of written work (Schmitt, 2020). Stæhr (2018) further supports this by demonstrating a strong correlation between vocabulary size and writing proficiency, noting that students with extensive vocabulary knowledge perform better in writing assessments. Moreover, vocabulary depth plays a crucial role in academic writing, where understanding word meanings, synonyms, antonyms, and collocations enhances lexical richness.

Qian (2022) highlights that students who deeply understand words and their associations are more likely to produce well-structured and cohesive essays. Lexical diversity, or the variety of words used in writing, has also been linked to higher scores in writing assessments (Yu, 2020). Conversely, students with a weak

vocabulary often struggle with organization, coherence, cohesion, and writing mechanics, making their compositions less effective.

Regarding the essential role of vocabulary in writing proficiency, teachers must implement strategies that enhance both vocabulary breadth and depth. The practical approaches include explicit vocabulary instruction, extensive reading exposure, lexical exercises such as word association and collocation training, and continuous writing practice. Nation (2023) suggests that teaching vocabulary in context and encouraging students to apply newly learned words in writing tasks significantly improve their writing skills. By strengthening students' vocabulary knowledge, teachers can help them develop their writing proficiency, ultimately fostering better communication skills and academic success. All assignments, including spoken assignments such as presentations and written assignments, require accurate language use to communicate effectively. Words convey ideas or information; when used correctly, the effectiveness of the communication increases concurrently, reducing the potential for misunderstanding. The accuracy may also be enhanced when specific technical or specialized terms are used correctly within assignments, demonstrating knowledge of the topic and the application of learning.

The broad but appropriate use of vocabulary will enhance the understanding of ideas or information presented. Many terms may have similar meanings but indicate subtle differences; good vocabulary skills will allow the most appropriate words to be chosen, increasing communication accuracy. For example, a task may be challenging to complete, but merely saying it hard only provides an ambiguous description that lacks detail. Using different words, such as complex, intricate, or problematic, implies the task may be challenging but provides more significant insights regarding how or why the task is complex.

When an individual has an extensive vocabulary, they have more words that may be selected, which can increase the precision. In addition, using the correct terms or words can also reduce the number of words or length of a sentence needed to express an idea. This factor may also be important for students writing assignments with a limited word count and aiding with ease of reading.

According to Dilek Karako  (2017), a particular vocabulary level is needed to learn the target language, and writing means production; it can be said that vocabulary plays an important role in writing by actively enabling language use.

In the study by Coxhead (2018), the students individually carried out an integrated reading and writing task. Then, they participated in an interview focusing on their language learning background and academic studies through vocabulary used in the reading and writing task. Data analysis showed that these students have an overall sense of the importance or need for academic vocabulary for their university studies, and they especially demonstrated a high level of awareness of the academic audience for their writing and its impact on their word choice. Furthermore, these participants used various techniques to incorporate academic or technical words into their essays. As the relationship between vocabulary and reading, the relationship between vocabulary and writing is also reciprocal. In other words, vocabulary knowledge and size impact writing, whereas writing helps improve vocabulary knowledge. Receptive vocabulary knowledge develops through various sources, but Laufer (2018) claims that productive vocabulary does not necessarily develop in parallel.

A study by Andrade and Du (2019) showed that well-designed rubrics incorporating organization, coherence, cohesion, mechanics, and vocabulary use provide clear expectations and reliable scoring. Using analytic rubrics allows educators to identify specific strengths and weaknesses in student writing, guiding targeted instruction. Furthermore, rubric-based assessment promotes consistency and fairness in evaluating writing proficiency.

These studies collectively indicate that both breadth and depth of vocabulary knowledge play an essential role in writing proficiency. While vocabulary breadth provides writers with a larger pool of words, vocabulary

depth ensures that those words are used correctly and meaningfully. Strengthening both aspects can lead to more organized, coherent, and cohesive writing, ultimately improving students' writing performance.

Enhancement Programs for Vocabulary Development and Writing

Somathasan (2021) says that intervention in education is a set of action items a teacher or administrator can take to improve a child's academic progress. Vocabulary enhancement involves using strategies with the specific goal of developing and expanding children's word knowledge. Children learn some word meanings indirectly through daily conversations with adults and other children, by listening to adults read to them and reading on their own.

Multiple practice opportunities are essential. Hearing, speaking, reading, and writing words in various contexts over extended periods builds students' breadth and depth of vocabulary knowledge. Students' knowledge is further strengthened when vocabulary instruction is implemented school-wide across all subject areas.

While vocabulary knowledge is critical to reading, some literacy challenges relate to other reading components, like word study and fluency. Developing students' vocabulary knowledge is essential for enhancing their writing proficiency. Effective enhancement programs should focus on both vocabulary breadth and depth to ensure students can recognize, understand, and appropriately use a wide range of words in their writing. The research highlights that explicit vocabulary instruction, meaningful language exposure, and writing-integrated activities significantly improve students' lexical knowledge and writing performance (Nation, 2022).

One practical approach is explicit vocabulary instruction, which directly teaches word meanings, synonyms, antonyms, and contextual usage. Teng (2015) emphasizes that structured vocabulary lessons help students better understand word relationships. Collocation exercises and word association tasks also enhance students' ability to use vocabulary naturally in their writing.

Another widely used strategy is reading and writing integration, where students are exposed to rich, authentic texts and are encouraged to apply newly learned vocabulary in writing tasks. Zhang (2019) demonstrates that extensive reading and guided writing activities facilitate students' development of lexical variety and grammatical accuracy. Activities like summarization, paraphrasing, and sentence expansion exercises encourage students to use diverse vocabulary in different writing contexts.

Several existing vocabulary focused enhancements have shown effectiveness in improving writing skills. For example, Lexical Approach Programs focus on teaching high-frequency words and academic vocabulary in context, allowing students to use these words effectively in essays (Schmitt, 2015). Process-based writing enhancements, such as those used in Zhang's (2019) study, emphasize prewriting activities, drafting, peer feedback, and revision, all of which support vocabulary retention and appropriate usage.

A combination of direct vocabulary instruction, contextual learning, and writing reinforcement provides the best results in improving students' writing proficiency. Teachers can implement structured vocabulary-building exercises alongside frequent writing practice to ensure students acquire new words and apply them meaningfully in their compositions.

Vocabulary Enhancements

The essential words routine is a quick and easy way to teach important vocabulary words. Teachers use a simple graphic organizer to introduce target words with definitions, visual cues, and examples. Students engage in immediate practice using the words through collaborative student turn-and-talk activities. This routine takes about 5 minutes per word.

The Frayer model is a graphic organizer that builds vocabulary and conceptual knowledge across content areas. Students define a vocabulary word and list its characteristics, examples, and non-examples. The

Frayer models can be completed in collaborative groups using textbooks and other subject-matter materials while the teacher circulates the classroom and assists students.

The semantic maps visually display and connect a word or phrase and a set of related words or concepts. Implementing semantic map activities in the classroom helps students recall the meanings of words and understand how multiple words or concepts "fit together." The teachers can use a semantic map, combined with explicit instruction and practice opportunities, to expand students' vocabulary and support their content knowledge.

The technological tools can be a great way to enhance one's vocabulary. Various educational software, apps, and online resources and platforms can help individuals improve their vocabulary skills. Educational software and apps are one type of technological tool that can be used for vocabulary enhancement. These tools can be accessed on a computer or mobile device, and many of them offer interactive features and games to make learning new words more engaging. Some popular options include Duolingo: This language-learning app teaches foreign languages and offers a feature to learn new vocabulary words in English. Vocabulary.com: This website and app offer personalized vocabulary practice based on a user's skill level and interests. Quizlet: This app allows users to create and study flashcards on various topics, including vocabulary.

In addition to educational software and apps, various online resources and platforms can help individuals improve their vocabulary. These resources often offer free access to various vocabulary-building tools and exercises. Some examples include Merriam-Webster Dictionary: This online dictionary provides definitions and offers a "Word of the Day" feature to introduce users to new words. Khan Academy: This website offers free educational resources on various subjects, including vocabulary-building exercises. Vocabulary.co.il: This website offers a range of vocabulary games and exercises for students of all levels.

Utilizing assistive technological tools for vocabulary enhancement can be an effective and engaging way to improve one's vocabulary skills. The formative assessments, such as vocabulary quizzes, exit tickets, think-pair-share activities, and word sorts, are essential for monitoring student learning.

The formative assessments help identify areas where students are struggling, and teachers can adjust the instruction to meet their needs. Providing feedback is an essential component of any effective vocabulary enhancement. The students can use various feedback mechanisms to understand their strengths and weaknesses and monitor their progress. Some examples of feedback mechanisms include rubrics, self-assessment checklists, peer feedback, and written feedback.

3. Methodology

The researcher employed a descriptive correlational research design to investigate the relationship between students' vocabulary knowledge—specifically its breadth and depth—and their writing proficiency. The study also aimed to describe the current levels of students' vocabulary knowledge and writing performance.

Descriptive correlational research aims to investigate the relationships between variables without manipulating them. According to Bhat (2023), this method is frequently used in educational settings, especially when experimental procedures are not feasible. It allows the researcher to identify possible patterns and associations among naturally occurring variables.

The participants in the study were 228 Grade 11 Senior High School students enrolled in the Reading and Writing Skills subject at PHINMA–Araullo University Main Campus during the second semester of the 2024–2025 school year. The total population consisted of 526 students from various academic strands, including ABM, GAS, HUMSS, and STEM. Using stratified random sampling, the researcher ensured fair representation of each strand. The sample size was computed using Slovin's formula, and the respondents

were randomly selected through the online tool "Wheel of Names."

The study was conducted at the Senior High School Department of PHINMA–Araullo University Main Campus, situated along Maharlika Highway, Barangay Bitas, Cabanatuan City, Nueva Ecija.

To gather the necessary data, the researcher utilized standardized tools. The Vocabulary Size Test (VST), developed by Nation and Beglar, was used to assess vocabulary breadth, while the Word Associates Test (WAT), developed by Read, measured vocabulary depth. The writing proficiency of the students was evaluated using a writing task from the PHINMA EDUCATION Network teacher's guide, assessed through an analytic rubric focusing on organization, coherence, cohesion, and mechanics.

The vocabulary tests were administered online using Google Forms and conducted during the students' online class sessions. Each test had a 30-minute time limit. To maintain a standardized testing environment, the researcher ensured clear instructions, a reliable internet connection, and minimal distractions. This method followed the approach recommended by Alruwaili and Sadik (2020), who emphasized the practicality of online assessments in education.

The writing task was administered in a face-to-face session to maintain authenticity and prevent academic dishonesty. Students were asked to complete a self-assessment after submitting their work, using the same rubric employed by the teacher-researcher. A panel of English language teachers reviewed the rubric for clarity and relevance. Their feedback helped refine the instrument and confirm its validity. As the rubric underwent expert validation, pilot testing was not necessary.

To analyse the results, the researcher used statistical tools. Frequency and percentage distributions were used to describe the respondents' profiles, while means and percentages were employed to interpret vocabulary and writing scores. Spearman's Rho was employed to determine the relationship between students' vocabulary knowledge and their writing proficiency, as well as the correlation between student profile variables and test performance.

4. Result and Discussion

This portion of the study gives the summary, conclusions, and the researcher's recommendations based on the results of the study.

Summary of Findings

This study, "The Relationship Between Vocabulary Knowledge and Writing Proficiency of Senior High School Students," aimed to assess the breadth and depth of students' vocabulary knowledge and evaluate its influence on writing proficiency. The study also analyzed the relationship between these skills and students' profile variables.

The study used a descriptive correlational method and involved 228 Grade 11 students from PHINMA–Araullo University Main Campus. The participants were selected through stratified random sampling and represented various strands including STEM, ABM, HUMSS, and GAS. Vocabulary knowledge was measured using standardized tests—the Vocabulary Size Test (VST) for breadth and the Word Associates Test (WAT) for depth. Writing proficiency was evaluated through a structured written output, scored using an analytic rubric focusing on organization, coherence, cohesion, and mechanics.

The findings showed that most respondents were female (67.98%) and the majority came from the STEM strand (41.23%). Over half (52.64%) had academic averages between 90 and 100 in their Quarter 1 performance in COR 002 (Reading and Writing Skills). Language emerged as the favorite subject among 79.39% of students, indicating high engagement with literacy-related content.

Vocabulary knowledge was interpreted as moderate across both dimensions. Students scored an average of 66.71 in the VST, representing an estimated vocabulary size of 13,342-word families. The WAT yielded a mean score of 97.70 out of 160 (62.11%), also classified as moderate. This suggests that while students had a functional vocabulary base, more development is needed for complex academic language use.

In writing proficiency, students performed best in organization (mean = 22.48), classified as “Excellent.” Scores in coherence (21.32), cohesion (21.28), and mechanics (22.04) were interpreted as “Proficient.” This implies that students are able to structure their writing well, but enhancements in fluency, transitions, and grammatical accuracy are still necessary.

Findings

The following are the specific problems considered with their corresponding findings:

The data revealed statistically significant relationships between selected profile variables—such as academic strand, general average, and favorite subject—and both vocabulary knowledge and writing proficiency. Students from academically rigorous strands such as STEM showed stronger vocabulary and writing scores. These results indicate that academic background and language interest influence performance in language-related tasks.

Furthermore, the study confirmed a significant positive relationship between students’ vocabulary knowledge—both in breadth and depth—and their writing proficiency. Learners who possessed wider vocabulary ranges and deeper lexical understanding performed better in writing tasks. They showed stronger skills in organizing thoughts, sustaining textual cohesion and coherence, and applying accurate language mechanics. This emphasizes the critical role of vocabulary development in academic writing success.

The findings validate that students with well-developed vocabulary perform better in writing. This connection underscores the importance of integrating vocabulary instruction into writing lessons to support both language comprehension and expression. The study supports the conclusion that writing proficiency is not isolated from vocabulary growth, but rather, closely aligned with it.

Conclusions

1. Based on the findings, the typical Senior High School student at PHINMA Araullo University is female, enrolled in the STEM strand, and performs well in the COR 002 (Reading and Writing Skills) subject, with most achieving grades between 90 and 100. A strong preference for Language subjects was also observed, suggesting that students in academic-intensive strands may develop habits that support higher performance in reading and writing.
2. The students demonstrated moderate vocabulary knowledge in both breadth and depth. With an estimated vocabulary breadth covering over 13,342-word families, they show sufficient knowledge for general academic reading. However, the moderate score in vocabulary depth points to the need for development in understanding word nuances, associations, and contextual applications—especially in complex academic writing.
3. In terms of writing proficiency, students were rated excellent in organization and proficient in coherence, cohesion, and mechanics. These results reflect a strong foundation in structuring written outputs. Nonetheless, improvement is still needed in refining transitions, strengthening sentence variety, and ensuring accuracy in grammar and punctuation to achieve higher-level academic writing standards.
4. A statistically significant relationship was found between both vocabulary breadth and depth and writing proficiency. Students with a broader and deeper vocabulary performed better across writing domains, particularly in coherence and cohesion. It reinforces the theoretical claim that vocabulary knowledge is a critical foundation for effective writing and suggests that targeted vocabulary instruction can directly improve writing performance.
5. The study also revealed that certain profile variables—notably strand, academic performance, and favorite subject, significantly influence students’ vocabulary and writing proficiency. These variables can help educators pinpoint which student groups may benefit from additional support. Meanwhile, sex was not found to have a significant effect, affirming that both male and female students can achieve comparable proficiency levels when provided equal academic opportunities and support.

6. In response to the findings, the WriteVocab Plus enhancement program was designed to address gaps in vocabulary knowledge and writing proficiency. This structured intervention integrates eight engaging, skill-based activities: (1) Word Vault Journaling, (2) Contextual Essay Writing, (3) Read-Reflect-Respond, (4) Peer Writing Clinics, (5) Lexis Game Hour, (6) E-Portfolio Compilation, (7) Language Ladder Challenges, and (8) Vocabulary Episodes Vodcast. These components are strategically aligned with PHINMA Araullo University's blended learning modality and offer students measurable, context-based, and interactive learning experiences that promote sustained growth in both vocabulary and writing.

Recommendations

1. Based on the findings of this study, it is highly recommended that PHINMA Araullo University implement the WriteVocab Plus Enhancement Program across all Reading and Writing Skills classes. This program, grounded in empirical findings, integrates vocabulary development directly into writing instruction through eight targeted components. Its implementation should be systematized per strand and year level, ensuring that the activities are scaffolded and contextualized to the student's academic needs. To measure its impact, teachers should use pre- and post-assessments on vocabulary and writing proficiency, track performance in organization, coherence, cohesion, and mechanics, and analyze trends in academic performance quarterly.
2. The language teachers should integrate structured vocabulary enrichment techniques into both online and face-to-face sessions. Specifically, the use of Word Vault Journaling, Read-Reflect-Respond, and Vocabulary Episodes Vodcast will enable students to record, analyze, and apply new vocabulary in meaningful contexts. The teachers must assign weekly vocabulary logs with contextual sentence usage, graded using a rubric assessing clarity, usage, and relevance. The reflections and vodcast-based writing prompts must be submitted bi-weekly, allowing for continuous formative feedback and individualized support.
3. To enhance writing proficiency in coherence, cohesion, and mechanics, it is recommended to establish Peer Writing Clinics twice a month during face-to-face sessions. These clinics will involve students reviewing each other's work using guided rubrics that focus on transitions, sentence variety, grammar, and punctuation. Teachers should facilitate feedback workshops and require students to submit revised drafts showing tracked changes. Improvement in these writing domains can be measured through rubric-based assessments and revision quality analysis.
4. An innovative practice that should be adopted university wide is the cross disciplinary integration of academic vocabulary instruction. The subject teachers, particularly in STEM, HUMSS, and ABM, should receive training on embedding high-utility and domain-specific vocabulary in their lessons. It ensures that vocabulary development is not limited to language classes but becomes a shared responsibility. This strategy responds directly to the correlation between strand and vocabulary proficiency and can be measured through collaborative lesson plans, vocabulary quizzes integrated into subject assessments, and periodic walkthroughs.
5. The institution should also establish personalized vocabulary enhancement tracks per strand, grounded in diagnostic data from vocabulary depth and breadth assessments. Instead of generalized instruction, students from STEM may focus on technical and scientific lexis, while HUMSS may deepen narrative and expository vocabulary. Language Ladder Challenges must be tailored per track and reviewed quarterly to ensure progression in vocabulary application. Strand-based portfolios will allow tracking of students' vocabulary growth and usage across subjects.
6. The administrators are urged to provide sufficient support in terms of tools, time, and technology. It includes access to low-bandwidth platforms, printable materials for students with limited internet access, and dedicated online spaces within the university's LMS for students to compile their E-Portfolios. These portfolios should include their vocabulary logs, reflective writings, and final essays, serving as both an assessment and documentation tool for vocabulary integration. The teachers should evaluate these

portfolios twice per semester, guided by a rubric focused on vocabulary diversity, contextual usage, and improvement over time.

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