

# Vocabulary Proficiency and Reading Comprehension of Senior High School Students: Basis for the Development of Supplementary Learning Material

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**Abstract:-** Understanding students' vocabulary proficiency and reading comprehension is essential for creating effective learning resources tailored to their unique learning styles in today's world. This research aimed to assess the vocabulary proficiency and reading comprehension levels of senior high school students for the development of supplementary learning materials. Specifically, it evaluated students' vocabulary breadth, depth, and usage, along with their reading comprehension skills. Additionally, the study explored perceived factors influencing these abilities and assessed the effectiveness of the newly developed learning tool, IntelliRead. Employing a mixed-methods approach, the study combined quantitative data from standardized tests with qualitative insights from interviews, involving 102 students for quantitative analysis and 20 for qualitative feedback. Results indicated varying levels of vocabulary proficiency and reading comprehension, influenced by factors such as reading habits and technological integration. IntelliRead was found to have strong instructional validity, suggesting its potential as a valuable resource for enhancing students' language skills. Recommendations include integrating technology-based tools into education, collaborating on tailored teaching strategies, and encouraging supportive reading practices at home. Future research should further explore the impact of these interventions on long-term student outcomes.

**Keywords:-** Vocabulary Proficiency, Reading Comprehension, Senior High School, Learning Material Development.

## I. INTRODUCTION

Language skills are essential for academic success and lifelong learning, particularly in today's educational landscape. In the 21st century, where digital innovations have revolutionized communication and access to information, the ability to comprehend texts critically is more important than ever. A strong foundation in vocabulary and reading comprehension enables students to navigate the complexities of this era effectively. As literature evolves to reflect modern human experiences, new themes, structures, and forms of expression require a solid linguistic base for full comprehension. Fauziati (2020) emphasizes that "vocabulary is crucial to language and particularly important to learning

English." This highlights how a robust vocabulary directly impacts one's ability to understand texts—those with extensive vocabularies tend to find reading comprehension easier than those with limited vocabularies.

In the Philippines, integrating technology into education has become a key strategy for enhancing students' language skills. The Department of Education's (DepEd) Order No. 016, s. 2023, or the "Revised Guidelines on the Implementation of the Department of Education Computerization Program," aims to infuse digital tools into the curriculum to create dynamic, engaging learning environments. These tools can support students in developing vocabulary and reading comprehension skills, as well as nurturing critical thinking. Manuel (2022) highlights the importance of this integration, emphasizing that students' awareness and use of technology for gathering information is vital in cultivating reading habits and maintaining active learning.

Despite these advancements, the Philippines faces a significant literacy crisis. A World Bank report revealed that 91% of Filipino children aged ten struggle to read simple texts, marking one of the highest rates of learning poverty in the East Asia and Pacific region. Further, the 2022 Programme for International Student Assessment (PISA) ranked the Philippines 76th out of 81 countries in reading proficiency, with only one public school surpassing the minimum proficiency level. The Bicol Region, in particular, has the highest number of illiterate individuals in the country (Jaucian, 2020), pointing to an urgent need for literacy interventions.

As an English teacher at Labo Science and Technology High School, the researcher observed a similar trend: only 102 out of 306 learners (33%) were classified as proficient readers, based on the Rapid Literacy Assessment (RLA). These findings underscore the necessity for targeted interventions to improve students' vocabulary and reading comprehension.

This study sought to explore the complex relationship between vocabulary and reading comprehension, especially in the context of literary texts. As education becomes increasingly digitized, the need for effective supplementary learning materials tailored to senior high school students'

needs and learning styles is growing. By investigating this relationship, the study aimed to contribute to the development of resources that will enhance students' comprehension abilities, thereby addressing the literacy challenges in today's classrooms.

#### ➤ *Framework of the Study*

This study is grounded in three key theories: Schema Theory, Dual Coding Theory, and Self-Regulated Learning Theory. Schema Theory emphasizes that students rely on their pre-existing mental frameworks, or schemas, to understand new information, making vocabulary knowledge a critical part of reading comprehension. Dual Coding Theory suggests that integrating both verbal and visual elements enhances memory and comprehension, offering a dual pathway for learning. Self-Regulated Learning Theory highlights the importance of learners taking an active role in monitoring their progress and adjusting strategies to meet learning goals. Together, these theories form a cohesive framework for developing e-learning materials that cater to the cognitive and self-regulation needs of students, ultimately improving vocabulary acquisition and reading comprehension.

## II. METHODOLOGY

#### ➤ *Research Design*

This study employed mixed methods - explanatory sequential design to provide a comprehensive and integrated understanding of the relationship between vocabulary proficiency and reading comprehension among senior high school students. This design begins with the collection and analysis of quantitative data, followed by the collection and analysis of qualitative data, which leads to interpretation.

During the initial quantitative phase, 102 out of 138 Grade 12 students were given vocabulary and reading comprehension diagnostic tests. These tests provided quantitative data on the students' vocabulary proficiency and reading comprehension skills. Subsequently, descriptive statistics was applied to illustrate the variability and overall performance levels of the students.

After analyzing the quantitative data, the researcher proceeded to the qualitative phase to dig further into the insights acquired from the quantitative analysis. In this phase, 20 students were selected for further qualitative investigation based on their quantitative scores. The researcher conducted in-depth interviews or focus group discussions to understand students' experiences, difficulties, vocabulary use, and comprehension. The qualitative findings from the explanatory phase were incorporated into the quantitative results from the initial stage. This integration requires comparing the two sets of findings to understand the study comprehensively. Then, the findings provided a solid basis for developing supplementary material.

#### ➤ *Respondents*

For a mixed methods approach, the sampling technique involves a combination of probability sampling for the quantitative phase and purposeful sampling for the qualitative phase. The probability sampling method was employed to

select 102 samples from a total of 138 Grade 12 students who were enrolled at Labo Science and Technology High School for the school year 2023-2024. This ensures that every student has an equal chance of being selected, enhancing the generalizability of quantitative findings. In the qualitative phase, participants for interviews were selected using the purposive sampling technique. This involves purposefully selecting participants with diverse perspectives and experiences relevant to the research questions, such as students with varying levels of vocabulary and reading comprehension skills.

#### ➤ *Data Gathering Tools*

As for the data collection instruments for the quantitative phase of the study, vocabulary and reading comprehension diagnostic tests were administered. These tests provided quantitative data on the student's vocabulary knowledge and reading comprehension levels. The vocabulary assessment included multiple-choice questions, fill-in-the-blank exercises, and sentence completion activities to evaluate the breadth and depth of students' vocabulary knowledge, while the evaluation of reading comprehension incorporated passages from different texts followed by questions that assess the student's ability to extract information, infer meanings, and analyze the text.

Conversely, in-depth interviews were used to collect qualitative data on students' experiences, challenges, and perceptions regarding vocabulary proficiency and reading comprehension. Students were able to express their ideas in their own words, gaining a deeper comprehension of the factors that influence their language skills and engagement with literature. Open-ended questions examined vocabulary enhancement strategies, comprehension difficulties, preferable learning approaches, and perspectives on studying different reading texts.

To measure the instructional validity of the developed supplementary material, the evaluation rating sheet for non-print materials of the Department of Education was utilized.

#### ➤ *Statistical Treatment of Data*

This study utilized various numerical means for all the gathered data. In this study, the standard deviation was used to calculate the mean in order to provide a clear picture of the central tendencies and dispersion of scores on vocabulary proficiency and reading comprehension assessments.

#### ➤ *Vocabulary and Reading Comprehension Assessment Scale*

This scale offers a standardized method for assessing an individual's language proficiency, serving as a valuable tool for teachers to tailor their instruction and interventions to enhance students' literacy development. A high mean with a small standard deviation suggests overall strong performance with little variation among students. Conversely, a low mean with a large standard deviation indicates weaker performance with a wide range of scores. This scale was validated by the Dean of the Graduate Studies and Research of the University of Saint Anthony and 4 language experts.

### III. RESULTS

#### ➤ *Vocabulary Proficiency of Senior High School Students*

In this study, the respondent's level of vocabulary proficiency was determined through a diagnostic test. The vocabulary test was divided into various aspects: Vocabulary

Breadth, which refers to the number of words in a person's vocabulary; Vocabulary Depth, which refers to how well a person knows the words in his/her mental dictionary; and Context Usage, which refers to how words, phrases, and grammar choices are tailored to fit the specific situation or purpose of communication.

Table 1 Level of Vocabulary Proficiency of Senior High School Students

| Vocabulary Proficiency |            |            |               |            |
|------------------------|------------|------------|---------------|------------|
|                        | Breadth    | Depth      | Context Usage | Overall    |
| Mean                   | 14.61      | 12.13      | 15.96         | 42.70      |
| Verbal Interpretation  | Developing | Developing | Developing    | Developing |
| Standard Deviation     | 5.66       | 5.38       | 6.05          | 15.12      |
| N                      | 102        |            |               |            |

Table 1 shows the level of vocabulary proficiency across dimensions of breadth, depth, and context usage, alongside an overall score, with a sample size of 102 participants. The mean scores for breadth, depth, and context usage are 14.61, 12.13, and 15.96, respectively, resulting in an overall mean score of 42.70. The interpretation suggests a developing level of proficiency across all aspects of vocabulary proficiency. The standard deviations reveal some variability in scores within each dimension, reflecting differing proficiency levels among respondents. The findings also suggest that respondents are in the process of improving their vocabulary skills.

With this, it can be affirmed that vocabulary breadth, vocabulary depth, and context usage are separate but related domains of lexical knowledge. This aligns with Gonzalez-Fernandez and Schmitt's (2017) assertion that breadth and depth of vocabulary knowledge do not grow parallel but are related and contribute to one another.

It can therefore be inferred that teachers should emphasize vocabulary instruction strategies that target both the breadth and depth of vocabulary, as well as the application of vocabulary in different reading texts, to support students'

overall language development. Additionally, interventions to enhance vocabulary skills may benefit from focusing on individualized approaches to address the variability in proficiency levels observed among respondents. Furthermore, since vocabulary proficiency is closely linked to academic achievement and cognitive growth, improving vocabulary skills could enhance students' learning outcomes and critical thinking abilities. As Nation (2015) noted in his paper on vocabulary learning: "Vocabulary is not an end in itself. A rich vocabulary makes the skills of listening, speaking, reading, and writing easier to perform."

#### ➤ *Reading Comprehension of Senior High School Students*

Table 2 presents the reading comprehension level among senior high school students in different reading texts. The mean score for reading comprehension is 11.21, with a standard deviation of 4.67, based on a sample size of 102 students. The students' reading comprehension level falls within the emerging level. The relatively high standard deviation signifies variability in students' comprehension levels within the sample, suggesting that while some students may have higher proficiency, others may struggle more with understanding texts.

Table 2 Level of Reading Comprehension of Senior High School Students

| Reading Comprehension |          |
|-----------------------|----------|
| Mean                  | 11.21    |
| Verbal Interpretation | Emerging |
| Standard Deviation    | 4.67     |
| N                     | 102      |

The lower reading comprehension level evident in various reading texts among senior high school students could arise from several factors. Some of these factors include the complexity of texts and the limited exposure to diverse texts, which pose challenges to students and impact their comprehension abilities. Deyto (2020) highlighted in an article that modern literature often features intricate narratives, diverse perspectives, and abstract themes, making it more challenging for readers to understand compared to traditional texts.

This suggests that the lower reading comprehension levels observed among senior high school students may indicate a disparity between traditional teaching methods and

the evolving nature of literary texts. Therefore, teachers need to reassess the selection of reading materials and develop instructional activities that contain various literary landscapes.

#### ➤ *Perceived Factors Affecting Vocabulary Proficiency and Reading Comprehension of Senior High School Students*

Exploring the multifaceted factors that contribute to vocabulary development and reading comprehension abilities is crucial in this study. Both vocabulary proficiency and reading comprehension are essential components of literacy skills. By understanding the factors, teachers, policymakers, and researchers can better tailor interventions and support

systems to enhance these skills among senior high school students.

- *Reading Habits.*

Encouraging reading habits is significant for academic success and personal growth. Regular exposure to a variety of literary genres enhances vocabulary and understanding while also improving critical thinking and analysis skills. Whether reading novels, essays, or digital content, students broaden their horizons, obtain new views, and gain a better comprehension of complex concepts. Reading improves memory and cognitive ability — which means it is a healthy habit that can help students in and outside the classroom.

*“My vocabulary development outside of school is influenced by my love for reading diverse genres, from fiction to news articles. Engaging with different mediums exposes me to a variety of words and perspectives” Student A stated.*

*“Outside of class, I enjoy reading novels and exploring online platforms where I encounter unfamiliar words and phrases. Additionally, participating in organizations broadens my vocabulary and critical thinking skills” Student O mentioned.*

The participants' responses clearly state the vital role of reading habits even outside the school. Students more inclined to read have more diverse learned words, which they can also use when reading texts, specifically in 21st-century literature. Aside from the new words they encounter, they also acquire new perspectives to understand various literary pieces. On the other hand, a study by Yusof (2021) revealed that the rise of information and technology has extensively changed the trends and behaviors of students' reading habits, slowly moving away from printed books to online source materials. This could be a reason for the decrease in reading habits of some senior high school students – the influence of digital disruptions.

- *Contextual Learning Strategies.*

These are techniques that enable students to understand unfamiliar words by linking them to surrounding terms or situations. It provides meaningful engagement, comprehension support, and connection to prior knowledge.

*“When encountering new vocabulary in 21st Century Literature, I often use context clues to infer the meanings” Student P asserted.*

*“I find the vocabulary resources provided in class helpful, especially the contextual exercises. They facilitate my discovery of complex texts and enable me to engage more deeply with the content” Student C posited.*

*“The vocabulary enrichment activities in class help enhance my vocabulary skills and comprehension of 21st Century Literature. I particularly like the discussions and analysis of word usage in different contexts” Student D affirmed.*

The participants' responses related to contextual learning strategies demonstrate a high link between using these strategies and improving reading comprehension and vocabulary competency. These emphasize the vital role of contextual learning strategies in enhancing language skills. Students who actively employ context clues, use vocabulary resources, and engage in discussions and analysis of word usage exhibit a more remarkable ability to comprehend challenging texts and expand their vocabulary knowledge. Integrating contextual learning approaches into classroom instruction leads to tangible developments in reading comprehension and vocabulary proficiency, eventually equipping students with the essential skills to navigate and efficiently engage with varied literary works. Background knowledge significantly influences a student's success in vocabulary and reading comprehension (Starke, 2021). Additionally, according to Queens University (2019), it fosters inference-drawing abilities in students, which enhances reading enjoyment and promotes critical thinking; students are more likely to develop a lifelong reading habit when they can understand the content and relate it to their prior knowledge or experiences.

- *Environmental Factors.*

This includes the student's home, school, social, and cultural environments. A rich social environment promotes effective vocabulary and reading comprehension among students, especially those with learning disabilities thus, English language teachers should provide a learning environment that is conducive to vocabulary and reading comprehension instruction, (Lazarus & Aransiola, 2020).

*“I learned new words and understood any reading texts at home. It is calm, cozy, and great for diving into books. It is like my safe place where I can relax and focus on reading. It is the best spot for me to enjoy my books or Wattpad” Student S stressed.*

*“For me, learning new words becomes much easier when I hear them spoken by my friends or classmates. It is as if the words stick in my mind more when they are used in casual conversation. Hearing a word in context makes it more relatable and understandable. The same is true for understanding literary texts; when my friends or students explain them to me, I understand them easily” Student Q claimed.*

*“In my experience, if reading is not encouraged or valued within the family, it is easy to fall behind in these skills. Learning a new word or language and accessing educational resources is less possible” Student G added.*

The statements from the participants show the strong impact of environmental factors on vocabulary development and reading comprehension. The value of a good home setting in which quiet and comfort make a perfect environment for students' literacy development. This implies that creating a calm atmosphere at home can encourage a good attitude for improving vocabulary learning and comprehension. On the other hand, the lack of encouragement or value for reading at

home can limit access to learning resources and weaken language learning. Difficulties such as having a lack of content to read, lack of technology to assist them, or lack of parental or adult support all act as disadvantages when it comes to student reading comprehension (Tuell, 2021).

Additionally, it shows that creating a positive family environment where reading is encouraged and valued is critical for improving vocabulary and comprehension skills. So, teachers should promote initiatives during parent-teacher assemblies that increase family involvement in the literacy development of students, as well as provide assistance to parents in creating a reading-friendly environment at home. According to Cigdemir (2022), family participation in vocabulary and reading activities is effective in improving students' literacy skills.

Furthermore, social interaction is important in literacy development since it aids vocabulary retention and literary interpretation. This underlines the importance of fostering collaborative learning in order to reinforce language skills in various contexts. As Lipp (2018) emphasized in an article, students' interactions with both peers and parents play crucial roles in language development. When students engage with their peers, they have the chance to observe different communication styles and participate in meaningful conversations. These interactions provide valuable learning experiences that contribute to the enhancement of their communication skills. The more diverse the interactions, whether with adults or peers, the more robust the student's communication abilities become.

- *Learning Aids.*

Students develop their literacy skills best through educational supports that provide help, guidance, or resources. It provides active engagement among students. According to Chung (2023), students who utilize visual aids exhibit improved understanding, memory, and involvement. Additionally, he asserted that visual aids were more effective for students with a lower degree of skill.

*"I think vocabulary enrichment activities are beneficial, especially for students like me. As we grow older, we encounter new words that we have not heard of before. Vocabulary enrichment activities help us develop our comprehension"* Student A pointed out.

*"Vocabulary enrichment activities like puzzles help me expand my vocabulary and understanding of literary texts. I am able to learn new unfamiliar words and widen my knowledge about them. I am relieved that whenever I encounter new words and ideas, I can now comprehend and understand them"* Student I mentioned.

*"I feel great and satisfied with the engaging activities and resources provided in our class because I had the opportunity to learn new words"* Student L uttered.

The responses of the participants demonstrate how learning aids or vocabulary enrichment activities conducted inside the classroom improve students' vocabulary and

comprehension skills. The emphasis on interactive methods like puzzles emphasizes the effectiveness of hands-on vocabulary acquisition. This shows how engaging learning experiences boost vocabulary and reading comprehension abilities. Kuruyer et al. (2017) underscored in their study that the result of the application of the enrichment activities or programs changes the students' ability to focus their attention and their memory development.

Moreover, the students' enjoyment of the activities emphasizes the necessity of teaching innovation and resourcefulness. Using various engaging teaching strategies, teachers can expand students' learning experience and meet their needs. This environment promotes vocabulary and a positive learning mindset. These implications support a comprehensive approach to language education that emphasizes experiential and interactive learning to develop student's language proficiency and comprehension abilities for academic success. According to Manullang et al (2020), engaging activities like crossword game allows students to learn foreign languages easily and without pressure, and at the same time, students can participate actively, especially in efforts to improve their English.

- *Technology Integration.*

Incorporating digital resources, such as e-learning platforms and online dictionaries, enhanced traditional classroom instruction. Students and teachers employed technology to access additional resources and facilitate and participate in interactive exercises focused on vocabulary and reading comprehension. By using technology, students also learn various 21st-century skills. Promoting the use of technology to assist students in their reading should be proactive in their search for a suitable one (Diallo, 2023).

*"Through the use of technology and other modern platforms, learning and improving my vocabulary skills is now more accessible because I do not have to look at every book to learn. It is now easier to study through the use of technology,"* Student J claimed.

*"The role of technology in supporting my vocabulary development and comprehension skills in 21st-century literature is very important. Technology is very interactive and engaging for me. It also promotes collaborative discussions and is easier to access,"* Student K cited.

*"Learning with fun is very helpful. Nowadays, I choose to use gadgets instead of books and printed literary texts, so having e-learning materials is a great tool for learning while having fun. It challenges my mind and helps me understand the text I am reading. In this way, I can expand my vocabulary and reading comprehension while enjoying it. Also, I can use the e-learning material anytime and anywhere I want,"* Student N added.

The participants reveal how much technology helps them learn new words and comprehend what they read. Students highlight that it is easier to study with technology because they no longer need physical books. Technology makes their learning more fun and engaging because they can

work together. It also mentioned that technology is very accessible. Bala et al. (2023) suggest that by offering tailored reading materials and interactive features, online reading platforms address students' specific challenges when engaging with complex words in texts. Their findings indicated that their adaptive nature, vocabulary enhancement features, and emphasis on analytical thinking significantly enhanced students' vocabulary and reading comprehension abilities.

Furthermore, the participants articulate how enjoying learning is essential. They especially think that learning should be fun and that technology can make that happen. When learning is enjoyable, it is easier for them to remember things and stay interested. It is also highlighted that using technology in education helps students understand complex words and texts better and makes learning much more exciting. This is supported by the findings of Zhang et al. (2020) that online reading platforms have been widely adopted in K-12 education and effectively enhance vocabulary and reading comprehension skills among students in various fields.

➤ *The Output of the Study*

Based on the study's findings, the researcher developed an e-learning tool called 'IntelliRead', which can be accessed both offline or online, to help senior high school students improve their vocabulary and reading comprehension of different literary texts. The tool consists of three main parts.

Firstly, the modules that cover topics related to the different forms and origins of literary texts. These modules are designed so that students will refrain from taking notes during classroom discussions, encouraging them to focus better. The modules can be accessed offline or without using the Internet.

Secondly, the e-games that aim at enhancing vocabulary proficiency and reading comprehension. These games make learning engaging and enjoyable while allowing students to practice essential skills. This part of the e-learning tool can also be accessed without the use of the Internet.

Finally, the tool includes a compilation of videos offering tips on improving vocabulary proficiency and reading comprehension. These videos provide additional support and guidance for students seeking to enhance their language skills. This part of the material and related video clips can only be accessed using the Internet.

Overall, IntelliRead serves as a comprehensive resource to aid senior high school students in reading different literary texts and improving their language abilities in an engaging and effective manner.

➤ *Validation of the Supplementary Learning Material*

*Content Quality.* Improving learning outcomes means ensuring that the supplementary learning materials align with what students need to learn. That is why it is vital to check whether these materials match the curriculum to measure their relevance and effectiveness.

Table 3 Validation of the Content Quality

| A. Content Quality   | WM          | VI                |
|--|-------------|-------------------|
| 1. Content is consistent with topics/skills found in the DepED Learning Competencies for the subject and grade/year level it was intended. | 4.00        | Very Satisfactory |
| 2. Concepts developed contribute to enrichment, reinforcement, or mastery of the identified learning objectives.                           | 4.00        | Very Satisfactory |
| 3. Content is accurate.  | 4.00        | Very Satisfactory |
| 4. Content is up-to-date.  | 4.00        | Very Satisfactory |
| 5. Content is logically developed and organized.   | 4.00        | Very Satisfactory |
| 6. Content is free from cultural, gender, racial, or ethnic bias   | 3.50        | Very Satisfactory |
| 7. Content stimulates and promotes critical thinking.  | 3.50        | Very Satisfactory |
| 8. Content is relevant to real-life situations.  | 3.50        | Very Satisfactory |
| 9. Language (including vocabulary) is appropriate to the target user level.  | 4.00        | Very Satisfactory |
| 10. Content promotes positive values that support formative growth.  | 3.50        | Very Satisfactory |
| <b>AWM</b>   | <b>3.80</b> | Very Satisfactory |

Table 4 reveals that almost all indicators are very satisfactory in the supplementary material with a 3.80 average weighted mean, exhibiting significant strengths in alignment with curriculum objectives and cognitive skill development. The highest weighted mean obtained is 4.00, suggesting that the material can be related to and supports the development of skills related to the Learning Competencies of 21<sup>st</sup>-century literature from the Philippines and the World subject. On the other hand, criteria numbers 6, 7, 8, and 10 rank 2<sup>nd</sup> with a 3.50 weighted mean, indicating that the content is satisfactory in being suitable for the student's level of development, largely free of biases related to ideology, culture, religion,

race, and gender, relevant to real-life situation, and support formative growth.

The results imply that the content of the material is important for senior high school students as they need to enhance these skills to navigate complex words and text which is part of the K-12 curriculum. Likewise, the evaluators strongly agreed that the supplementary material is closely tailored to the curriculum, aiding in students' progression and understanding of the subject matter, and is engaging, relevant, and likely to capture students' attention, which is crucial for maintaining their motivation and active participation in learning activities.

Therefore, the content of the supplementary material is valid and highly suitable for developing the vocabulary and reading comprehension of senior high school students. This is supported by the findings of Katili (2023) that supplementary materials should be developed in an interesting and easy way, the language used must be appropriate to the students' language level, build cultural awareness, and motivate students to read.

• *Instructional Quality.*

Table 4 presents the evaluation of the instructional quality of the supplementary material, highlighting criteria crucial for its effectiveness in aiding the vocabulary and reading comprehension development of senior high school students.

Table 4 Validation of the Instructional Quality

| <b>B. Instructional Quality</b>   | <b>WM</b>   | <b>VI</b>                |
|---|-------------|--------------------------|
| 1. Purpose of the material is well defined.                                   | 3.00        | Satisfactory             |
| 2. Material achieves its defined purpose.                                     | 3.50        | Very Satisfactory        |
| 3. Learning objectives are clearly stated and measurable.                     | 3.00        | Satisfactory             |
| 4. Level of difficulty is appropriate for the intended target user.           | 3.50        | Very Satisfactory        |
| 5. Graphics / colors / sounds are used for appropriate instructional reasons. | 4.00        | Very Satisfactory        |
| 6. Material is enjoyable, stimulating, challenging, and engaging.             | 4.00        | Very Satisfactory        |
| 7. Material effectively stimulates creativity of target user.                 | 3.50        | Very Satisfactory        |
| 8. Feedback on target user's responses is effectively employed.               | 3.25        | Very Satisfactory        |
| 9. Target user can control the rate and sequence of presentation and review.  | 4.00        | Very Satisfactory        |
| 10. Instruction is integrated with target user's previous experience.         | 4.00        | Very Satisfactory        |
| <b>AWM</b>  | <b>3.58</b> | <b>Very Satisfactory</b> |

Table 5 reveals notable findings regarding the evaluation criteria. Specifically, criteria numbers 5, 6, 9, and 10 exhibit the highest mean score of 4.00. This underscores the material's efficacy in engaging students, presenting suitable challenges, and effectively integrating with their prior knowledge and experiences. Conversely, criteria numbers 2, 4, and 7 all secure the second position with a weighted mean of 3.50. This emphasizes the material's success in fulfilling its intended purpose, catering to its user's needs, and fostering creativity. In contrast, criteria numbers 1 and 3, which pertain to the clarity of the material's purpose and the measurability of learning objectives, received the lowest weighted mean of 3.00, placing them in the satisfactory range.

The results suggest that materials used in reading texts with high engagement, appropriate challenges, and effective integration with prior knowledge significantly enhance vocabulary proficiency and reading comprehension. Emphasis on stimulating creativity alongside fulfilling intended purposes underscores the importance of critical thinking in language acquisition. However, areas for

improvement include ensuring clear and measurable learning objectives. Overall, thoughtful selection and design of instructional materials are crucial for promoting strong literacy skills, empowering students to engage meaningfully with literature and develop proficiency in vocabulary and reading comprehension.

As stated in the study of Sukardi et al. (2020), modern learning requires students who are dynamic and ready to develop independently. Thus, learning materials should guide students to think critically and solve problems, as well as be innovative and creative.

• *Technical Quality.*

Table 5 shows that the developed supplementary learning material garnered a very satisfactory rating from evaluators, boasting an average weighted mean of 3.64. Notably, three indicators attained a weighted mean of 4.00, indicating very satisfactory performance; these include accurate visual representations, user-friendly navigation, and ease of use.

Table 5 Validation of the Technical Quality

| <b>C. Technical Quality</b>  | <b>WM</b>   | <b>VI</b>                |
|--|-------------|--------------------------|
| 1. Audio enhances understanding of the concept.                                      | 3.50        | Very Satisfactory        |
| 2. There is complete synchronization of audio with the visuals.                      | 3.75        | Very Satisfactory        |
| 3. Music and sound effects are appropriate and effective for instructional purposes. | 3.75        | Very Satisfactory        |
| 4. Screen displays (text) are uncluttered, easy to read, and aesthetically pleasing. | 3.75        | Very Satisfactory        |
| 5. Visual presentations (non-text) are clear and easy to interpret.                  | 3.75        | Very Satisfactory        |
| 6. Visuals sustain interest and do not distract the user's attention.                | 3.50        | Very Satisfactory        |
| 7. Visuals provide an accurate representation of the concept discussed.              | 4.00        | Very Satisfactory        |
| 8. The design allows the target user to navigate freely through the material.        | 4.00        | Very Satisfactory        |
| 9. The material can easily and independently be used.                                | 4.00        | Very Satisfactory        |
| 10. The material will run using minimum system requirements.                         | 3.00        | Satisfactory             |
| 11. The program is free from technical problems.                                     | 3.00        | Satisfactory             |
| <b>AWM</b>   | <b>3.64</b> | <b>Very Satisfactory</b> |

Similarly, the remaining criteria achieved a very satisfactory rating with a 3.75 and 3.50 weighted mean respectively, signifying adherence to standards such as synchronized audio-visual elements, effective utilization of music or sound, appealing screen displays, and clear visual representations. In contrast, criteria 10 and 11 received a satisfactory rating with a 3.00 weighted mean, indicating that the supplementary material functions smoothly with minimal system requirements and may experience only minor loading issues with the programs.

The results underscore the strength of the supplementary material in facilitating engaging and effective learning experiences. Its balanced combination of visual appeal, interactive features, and multimedia integration aligns well with the needs of senior high school students, catering to diverse learning styles and preferences. By providing a user-friendly interface and incorporating elements that enhance comprehension and retention, the tool guarantees valuable supplementary material for teachers seeking to improve vocabulary and reading comprehension skills among senior

high school students. This is supported by the findings of Ariani & Marleni (2023)<sup>21</sup> that teaching aids should be long-lasting and able to withstand regular use in the classroom. It should also have interesting shapes and colors to capture students' attention and make the learning experience more enjoyable.

• *Other Findings.*

One of the most vital aspects of a learning material is its precision as errors can lead to misconceptions and hinder the learning process. Table 6 demonstrates that the average weighted mean of the supplementary learning material for other findings is 4.00, which means it has no errors.

Therefore, it can be inferred that the developed supplementary learning material is up-to-date, unbiased, and presents information objectively. This assures that students will receive accurate and current information, which is essential for effective learning.

Table 6 Validation on Other Findings

| <b>D. Other Findings</b>  | <b>WM</b>   | <b>VI</b>          |
|---|-------------|--------------------|
| 1. Conceptual Errors  | 4.00        | Not present        |
| 2. Factual Errors   | 4.00        | Not present        |
| 3. Grammatical and/or typographical errors  | 4.00        | Not present        |
| 4. Other errors (i.e., computational errors, obsolete information, errors in visuals, etc.) | 4.00        | Not present        |
| <b>AWM</b>  | <b>4.00</b> | <b>Not present</b> |

Further, these results suggest that the supplementary material is effective in supporting student learning and enriching their skills in vocabulary development and reading comprehension. Accurate material provides discourses, texts, images, and illustrations following the competency that must be achieved and is beneficial for the fulfillment of students' curiosity (Rahmat, Arepin & Sulaiman, 2020).

**IV. CONCLUSIONS AND RECOMMENDATIONS**

The conclusions drawn from the study indicate that senior high school students exhibit developing proficiency in vocabulary, with varying levels across dimensions like breadth, depth, and context usage. The significant variability in reading comprehension underscores the need for tailored instructional approaches. Factors such as reading habits, environmental influences, and technology integration were identified as crucial in shaping language learning outcomes. The development of IntelliRead, an e-learning tool, addresses these needs, with expert evaluations confirming its effectiveness in enhancing vocabulary and comprehension skills. In light of these findings, several recommendations are made. DepEd and school administrators should support the integration of technology into classrooms to address these language gaps and improve international assessment outcomes. Teachers are encouraged to incorporate IntelliRead in their lessons, while school leaders should facilitate collaboration to develop personalized instructional strategies. Parents play a vital role in fostering reading habits at home, and researchers are advised to explore further the long-term effects of technology-driven learning tools like IntelliRead.

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