International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Reading Comprehension Among Junior High School Students Through Werpa

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ABSTRACT
This study evaluated the effectiveness of We Enhance Reading Program Advocacy (WERPA), a school-wide reading intervention program implemented at Badas National High School (BNHS) to address reading challenges among Junior High School (JHS) students. This employed Quasi-experimental research which used data from the Philippine Informal Reading Inventory (Phil-IRI) pretests. The study identified 209 students at the Frustration Level in reading, with Grade 7 having the highest concentration. Wilcoxon Signed-Rank Test results revealed a statistically significant improvement in both reading comprehension and word recognition post-intervention, with substantial effect sizes (r = -0.977 for comprehension; r = -0.687 for word recognition). The most pronounced gains were observed among Grade 7 students, highlighting the benefit of early intervention. Although there is no significant correlation between reading level and students' study habits, a remarkable relationship emerged between reading comprehension and elementary school background, signifying the impact of early educational experiences on the learner's reading proficiency. These findings supported the effectiveness of WERPA in improving reading ability, especially among lower grade levels, and underscored the importance of structured, teacher-led interventions and continuity of literacy instruction from basic through secondary education.

Keywords: BNHS, comprehension, frustration level, Phil-IRI, reading intervention, reading level, WERPA

Chapter I
INTRODUCTION
Background of the Study

Reading is an essential part of a person's daily life because it helps individuals better understand the vast amounts of information available in both printed and multimedia sources (Sedlmayr and Weissenbacher, 2025). Campilla and Cariño (2024) further emphasized that reading comprehension is vital for various tasks in educational settings. However, many Filipino students encounter challenges in developing this important skill (Francisco, 2025). Baclig (2022) also added that less than 10 percent of Filipino children can read simple text or comprehend a simple story—based on a joint report by the United Nations Children's Fund (UNICEF), UN Educational, Scientific and Cultural Organization (UNESCO) and the World Bank titled "Where are We on Education Recovery?" This same situation was reflected in the country's reading achievement, as reported by Almagro et al. (2024) and Lucas et al., (2021), which indicated that the Philippines ranked lowest in reading comprehension among 79 countries in the 2018 PISA.

The reading foundation that children need to establish when they first start school should be developed through reading practice. Learning problems that begin with early reading difficulties will continue to affect a person throughout their life. Mihret and Joshi, (2025) observed that reading difficulties affect most students, creating a serious obstacle to their educational progress and academic performance.

Phil-IRI pretest conducted at Badas National High School (BNHS) showed that 35% of the JHS students enrolled in the school year 2022-2023 were under the Frustration Level, which confirmed that the students have difficulty comprehending the given text despite modeling. Hence, the We Enhance Reading Program Advocacy (WERPA) has been developed to close the reading comprehension gap in BNHS. Reading interventions are broadly effective for refining the reading proficiency of younger and older students with reading difficulties (Donegan et al., 2025). On the other hand, assessment of the reading intervention's effectiveness guided educators to build theory-driven, systematic, motivation- enhancing, and explicit intensive instruction tailored to the student's instructional level.

The research measured the effectiveness of the reading intervention by testing students' reading skills through a series of systematic assessments and ongoing testing. The program evaluation assessed its impact on students' reading skills, their motivation to study and their study habits. The results offered evidence-based reading interventions that educators and researchers in literacy education could use to create customized interventions for similar classroom situations.

Statement of the Problem

This study aimed to determine the effectiveness of the reading program implemented by the BNHS, known as WERPA.

Specifically, it is intended to address the following questions.

1. What is the number of JHS students who fall under the frustration reading level using the Phil-IRI pretest, in terms of:

a. word recognition.

b. reading comprehension.

2. What is the student's reading comprehension level before and after the implementation of WERPA?

3. Among the different grade levels, in which does WERPA prove to be most effective?

4. Is there a significant relationship between the students' reading level and the following variables:

a. the elementary school they attended

b. their reading habits.

Objectives of the Study

The main objective of the study was to determine the effectiveness of the reading program known as WERPA implemented by BNHS in enhancing JHS students' reading comprehension.

Specifically, the study aimed to:

1. Identify the number of JHS students who fall under the frustration reading level using the Phil-IRI Pretest, in terms of:

a. word recognition

b. reading comprehension

2. Determine the students' reading comprehension before and after the implementation of WERPA in BNHS.

3. Identify the grade level at which WERPA is most effective.

4. Identify the relationship between the students' reading level and the following variables:

a. the elementary school they attended

b. their reading habits

Hypothesis

Null Hypothesis

1. There is no significant relationship between students' reading comprehension and the reading program WERPA.
2. There is no significant relationship between the students' reading level, the elementary school where they came from, and their reading habits.

Significance of the Study

The purpose of this study is to improve reading comprehension through oral reading fluency.

The results of the study will be beneficial to the following:

School Administrators. These include the higher positions on the school premises, especially the department heads and the school principal. Through this study, the implemented reading program's effectiveness will be determined, which will result in the improvement or enhancement of the program as an intervention to attain reading comprehension.

Teachers. This study will lead to a broader investigation and evaluation of reading intervention programs and best practices that address the struggling readers' dilemma among older students, which may result in the improvement of the students' academic performance.

Students. The result of this study provides students with an effective reading intervention program that will help in the development and improvement of their comprehension skills, which most likely lead to progress in their academic performance and other future undertakings.

Future Researchers. This could serve as their reference or additional related literature for their research.

Scope and Limitation of the Study

This study aimed to determine the level of reading comprehension among JHS students enrolled at BNHS located at Camansi, Badas, Mati City, in the school year 2022-2023. The students' reading ability was assessed using a Phil-IRI pretest, focusing on two components: word recognition and reading comprehension. Moreover, students who fell under the Frustration Level based on the conducted pretest participated in a reading intervention known as WERPA. After the intervention, the same students underwent a posttest to measure any improvement and to assess the reading intervention's effectiveness.

The researcher only determined whether there was a significant relationship between students' reading comprehension and the implementation of WERPA. Other variables, such as teaching strategies and individual learning differences, were not explored.

Definition of Terms

The following terms used in this study are being defined operationally for clarity and a common frame of reference, to form impressions and perceptions, and to identify similarities in the out-of-field abstract of this study and relate it to the larger frame of educational knowledge.

Badas National High School (BNHS)- is one of the schools of Mati City Division, located at Camansi, Badas, Mati City, where the study will be conducted.

Comprehension- is an active process that requires intentional and thoughtful interaction between the reader and the text to understand what is being read.

Phil-IRI- refers to the revised assessment tool composed of a set of graded passages administered to the whole class and to individual students, which was designed to determine a student's reading level.

WERPA- stands for We Enhance Reading Program Advocacy, the reading program implemented by the BNHS to help Frustration Readers improve their reading comprehension.

Frustration Level- is the level at which readers find reading materials so difficult that they cannot successfully respond to them.

Reading Intervention- is a set series of practices, strategies, and methodologies used to address significant reading deficiencies.

Reading Level- is the level at which a learner can read and comprehend a leveled text or graded passage; given a particular leveled text, a learner may fall under any of the following reading levels: a. independent, b. instructional and c. frustration.

Conceptual Framework

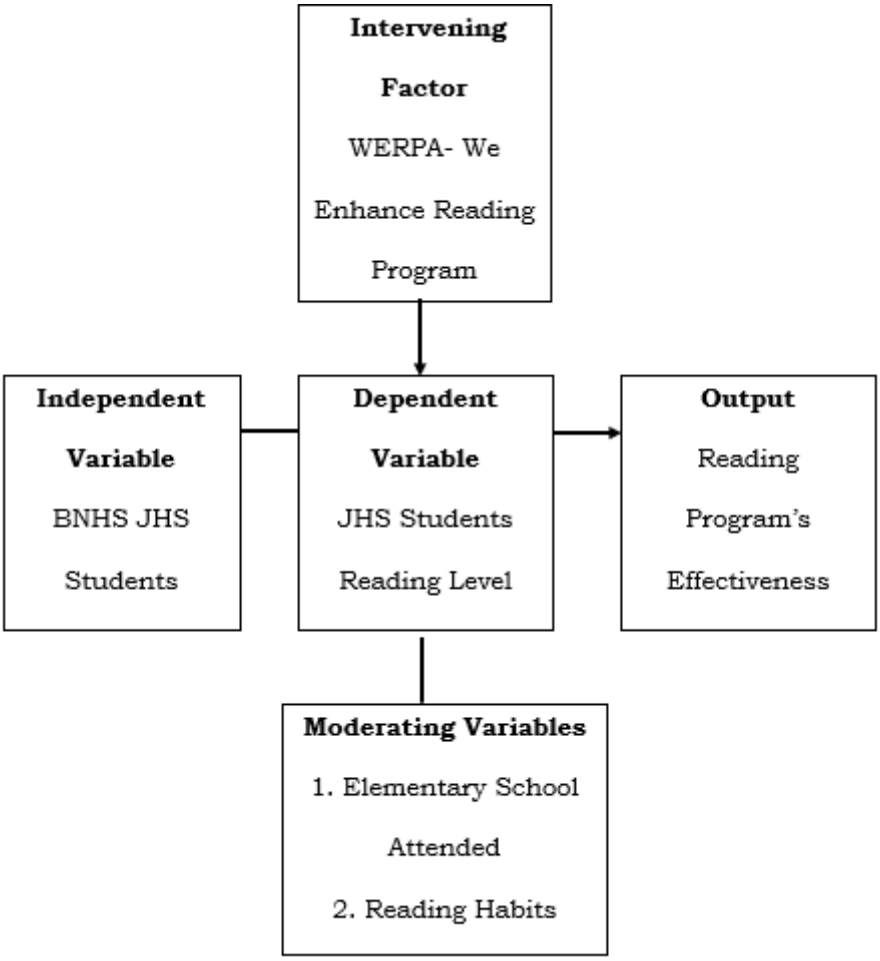

Figure 1. The conceptual framework of the structural relationship between the independent variable, which is BNHS JHS students and the dependent variable, which is the students' reading level. WERPA functions as an intervening factor that influences the development of students' reading proficiency. Meanwhile, moderating variables such as a) the elementary school attended, and b) reading habits may affect the extent to which the program contributes to the overall effectiveness of the implemented reading intervention.

Chapter II
REVIEW OF RELATED LITERATURE

Reading Comprehension

Reading comprehension is a critical skill paramount to lifelong learning that needs to be enhanced as it will greatly affect the learner's life (Apiles, 2025). Ismail et al. (2025) also added that it is vital for

academic success because it serves as the foundation of all content-area learning. Literacy level can improve a person's quality of life because it is closely tied to his or her work. Literacy is directly related to academic achievement. As a result, a developing individual with advanced literacy who can grasp and read critically is one of the most essential aims of today's education (Tomas et al., 2021).

Moreover, Idulog et al. (2023) posited that reading enables everyone to connect their prior knowledge with their learning, improve their grasp of ideas and practices, and ensure that these are continually passed down to future generations. It is one of the basic abilities that every student should have in order to gain knowledge, learn, and progress to a higher level of education and live a normal life (Manalo-Villaruz, 2021).

Reading comprehension is a complex process that involves multiple cognitive skills (Adi, 2024). It includes several key components that function together to help readers comprehend and interpret text effectively (Moore, 2012). These critical components include phonemic awareness, phonics, fluency, and vocabulary.

Phonemic Awareness

Current reading research shows that several key factors impede a student's reading comprehension (Sanford, 2015). Librea et al. (2023) added that one of the most important skills in literacy is phonemic awareness, the ability to process the individual sounds of letters, which is needed for word recognition. According to Al Otaiba et al. (2019), reading is the product of a) code-focused skills, such as phonemic awareness and decoding, and b) meaning-focused skills, such as vocabulary and comprehension. Moreover, Carruth and Bustos (2019) emphasize that teaching students to read involves many different components, one of which is phonemic awareness.

Phonemic awareness has been pointed out as one of the most significant predictors of early reading ability success (Veríssimo et al., 2021). It signifies a previous ability to read that leads to better results in language acquisition, and its success leads to effective literacy learning. It should be noted that it is important and necessary for the educational process, as without phonological awareness, students lose their ability to write or read (Al-Zoubi & Abunawas, 2025). In addition, Abdon and Barrios (2022) claimed that the development of strong reading skills among students is crucial to overcome language and academic barriers and ensure future success in education, which highlights the significant impact of phonological awareness on children's reading ability. Further, Binkley et al. (2025) suggested that one must be able to manipulate phonemes in order to develop appropriate target words for the treatment of speech sound disorders (SSDs). To accomplish these professional tasks, strong phonological awareness skills are required.

Based on the National Reading Panel report in 2000, a meta-analysis was conducted to investigate several questions pertaining to phoneme awareness. The results led to a strong conclusion that phoneme awareness can and should be taught since phoneme awareness training provides benefits not only in word identification but also in reading comprehension (Brady, 2020). This conclusion emphasizes the importance of providing clear, systematic phonemic awareness teaching as part of a comprehensive literacy program (Ummah, 2019).

Phonics

Phonics is one of the key elements in reading and comprehension. Oftentimes, it is often confused with phonemic awareness, but they serve distinct roles in literacy development. Phonemic awareness is a prerequisite to phonics. Students must first recognize and manipulate sounds before they can map them to letters (Burke, 2020). Brady (2020) added that a learner must first become aware of individual phonemes

in spoken words to subsequently learn that those phonemes are represented by letters. Fostering phoneme awareness before introducing letters is advised because it allows focus on the spoken form of phonemes, avoiding confusion with visual letters or letter names (Rumohr, 2024).

Furthermore, phonemic awareness is defined by Ligoyligoy et al. (2025) as a fundamental element of reading competence, which entails the recognition and manipulation of speech sounds. Phonics enhances this by imparting letter-sound correlations, thereby facilitating the acquisition of decoding abilities. Burke (2020) stated that many students struggle with phonics because they lack the prerequisite phonemic awareness skills.

Phonics is the systematic teaching of the sounds conveyed by letters and groups of letters and includes teaching children to combine and blend these to read or write words (Faris, 2018). Based on the Literacy Teaching Guide : Phonics Literacy Teaching Guide : Phonics (2009), phonics involves knowing the connections between printed letters (and combinations of letters) and speech sounds. Phonics instruction involves teaching students to recognize the relationships between letters and sounds and how to apply this knowledge to read words accurately and spell words correctly when writing (Birger, 2024).

According to the NRP, as cited by Bandala (2024), phonics instruction produces significant benefits for children's reading ability, including their comprehension, especially when introduced in the lower years. This claim emphasized that systematic phonics instruction develops stronger reading comprehension skills.

Vocabulary Instruction

Numerous cognitive processes are employed when reading to enhance comprehension. One of these is strong vocabulary skills, which are needed to support a student's ability to read proficiently. Butterfuss et al. (2020) found that vocabulary and prior knowledge make the most significant direct contributions to reading comprehension, followed by inferencing, word reading, and reading strategies. Moreover, Workie and Feleke (2020) added that vocabulary and prior knowledge have a large direct contribution to reading comprehension, particularly when texts require a literal understanding.

Vocabulary knowledge is one of the most important factors contributing to reading comprehension. Researchers continue to confirm the importance of vocabulary for English learners' literacy skills, especially in reading comprehension (Winkler et al., 2021). Zeng et al. (2025) added that a strong vocabulary foundation is critical not only for literacy development but also for effective communication and access to complex academic materials. As cited by Pikulski and Templeton (2004), a large vocabulary is a strong predictor and reflection of high levels of reading achievement, as it helps readers better understand and grasp meaning more effectively. On the other hand, poor vocabulary skills can significantly limit a learner's ability to comprehend written texts (Brooks et al., (2021).

Learning vocabulary is fundamentally about learning the definition of words (Shanthi & Rajkumar, 2020). A systematic review of vocabulary research determined that defining words before reading a text is an effective instructional technique to support vocabulary growth and enhance reading comprehension (Moody et al., 2018). Moreover, Ng'andu (2024) describes the correlation between vocabulary knowledge and language practice as complementary. Vocabulary skills enable language use and conversation. He emphasized that language use leads to an increase in vocabulary knowledge.

Text Comprehension Strategies

Reading comprehension is essential for academic success and lifelong learning, and its development heavily depends on effective teaching practices (Espinar & Narido, 2025). Javed et al. (2015) also added that teaching learners to become effective readers is an important goal in the early years of schooling. It

involves expanding students' vocabularies and knowledge of the world, developing their knowledge of English grammar and decoding skills, developing their reading fluency, and extending their ability to comprehend what they read and view from the literal level to the inferential and critical levels (Manurung et al., 2022).

In the educational landscape, the ability of the child to comprehend stands as an essential skill, crucial for academic success, professional advancement, and lifelong learning. The learner's ability to comprehend written texts effectively not only facilitates knowledge acquisition but it also empowers the individuals to navigate complex information, critically analyze content, and engage with diverse perspectives. Central to the development of proficient reading comprehension are the strategies the learners employ to decode, interpret, and integrate information from texts (Pastera et al., 2024).

Comprehension strategies are conscious plans. These are sets of steps that good readers use to make sense of the text. Comprehension strategy instruction helps students become purposeful, active readers who are in control of their reading comprehension (Vaughn & Fletcher, 2021). In addition, comprehension strategies are conscious or intentional plans that people use to achieve a goal and are used deliberately to make sense of the text. According to Hilmi et al. (2018), readers use strategies consciously to make sense of the text, recall critical ideas, and integrate new learning into their existing schema or prior knowledge. Students need to learn how to use strategies independently, recognize and solve problems, and delve deeper into the text to make connections and inferences (Rahmatillah, 2018). Peng Peng et al. (2023) further added that reading comprehension strategies are helpful when used alone but may be more effective when several effective strategies are used together.

Reading Fluency

Developing reading skills among learners is crucial. It includes enhancing students' reading fluency so that they can understand the passages they are reading (Canuto et al., 2024). Based on the definition provided, it is evident that the reading skills required for fluent reading to occur include accuracy, speed, and prosody (Gedik & Akyol, 2022).

Fluency refers to the automatic recognition of words, allowing readers to focus on understanding rather than decoding individual words. When readers lack fluency, they struggle to recognize words quickly and spend an excessive amount of time decoding, adversely affecting their overall reading ability (Masterson, 2025). A journal about reading fluency states that fluency is the combination of rate and accuracy, automaticity, and prosody, which leads to comprehension. It serves as a bridge between the two major components of reading–word interpreting and comprehension. Fluency connects to comprehension through prosody, or expressive interpretation (Rasinski, 2004). In addition, Domingue et al. (2021) noted that building reading comprehension skills requires a long-term strategy in which all reading skill areas (phonics, fluency, vocabulary) contribute to success.

For many years, educators have recognized that fluency is an important aspect of reading. It is the ability that allows individuals to read with speed, accuracy, and proper expression (National Reading Panel, 2000). Various studies have indicated that fluency is one of the critical building blocks of reading because fluency development is directly related to comprehension (Sara, 2021). National Reading Panel found that "reading fluently improved the students' abilities to recognize new words; read with greater speed, accuracy, and expression; and better understand what they read," which highlights the relationship between fluency and comprehension (Boyt, 2015). Being a fluent reader allows students to concentrate on the content of the text during the reading process, rather than focusing on the decoding of each word.

It is important to master decoding skills before becoming a fluent reader. Based on the research conducted by Guenin (2017), word recognition reading skills help poorer readers' fluency. Likewise, as pointed out by Pikulski and Chard (2005), reading requires at least two activities: 1) word identification or decoding and 2) comprehension or the construction of the meaning of the text. Moreover, Rasinski (2012) added that teachers are aware that many students who struggle with reading comprehension have not yet achieved sufficient levels of reading fluency to support and enhance their comprehension.

Ming, (2018) stressed that the strong relationship between fluency and comprehension is further accentuated by additional reading practice, as students read more, their fluency improves, positively impacting their ability to comprehend text. Consequently, as comprehension increases, a student's oral reading fluency is also improved (Denton et al., 2011).

Many researchers have found that oral reading fluency is an important indicator of reading proficiency, demonstrating the predictive nature of reading fluency scores as indicators of reading comprehension ability (Nese, 2022). Much of this research has focused on criterion-related evidence in which fluency measures are correlated with other important indicators of reading ability and achievement (Talada, 2007). Reading fluency has been a persistent problem among learners. Several experimental studies have revealed the existence of this problem in many primary and secondary schools as well. Over the past century, experimental psychologists have popularized the automaticity theory as a relevant paradigm for developing children's reading fluency (Feruzi, 2021). Warrington (2006) stressed that fluent readers characteristically seem to be able to decode, not by guessing from context or prior knowledge of the world, but by an automatic identification that requires no conscious cognitive effort. Canuto et al. (2024) emphasized that reading fluency is supported by automaticity theory, which focuses on word recognition. In this theory, reading fluency is the ability to simultaneously decode and comprehend text.

The components of fluency are difficult to scrutinize in isolation. Scali (n.d.) believed that fluency is a combination of various components that cannot be separated. Educators are encouraged to monitor oral reading fluency so that readers can make sense of what they read. Research reveals that fluency is a significant component that joins the gap between word recognition and comprehension (Denton et al., 2011). It is one of the five components of reading competency, along with phonemic awareness, phonics, vocabulary, and comprehension (Brown, 2004). It is related to reading comprehension and can be used to predict the reading competency of a reader (Pey et al., 2014).

Reading Assessment

Reading proficiency is a fundamental cornerstone of academic achievement, functioning as an essential tool that enables broader learning and community involvement (Baye et al., 2019). Reading competency is not merely an isolated skill but a critical component that facilitates academic learning across all subject areas. This understanding is crucial because reading deficiencies can create a cascade of challenges across the educational spectrum. Balaba et al. (2022) highlighted the importance of diagnostic assessment in reading instruction, emphasizing that effective teaching strategies must thoroughly understand each student's current achievement level and potential for progress.

In addition, reading assessment, as explained by Snow et al. (2005), has great power to inform researchers, teachers, administrators, and policymakers. Assessment practices can significantly benefit the learning environment or inflict great harm. It should produce information that is useful in helping students become better readers and not harm (Afflerbach, 2016). Therefore, it requires careful treatment, attention, and respect. It should assist the teacher in targeting areas of strength and weakness, monitoring student reading development, and planning appropriate instruction (Diamond et al., 2018). Thus, teachers have a

responsibility to understand the uses and impacts of reading assessments and be mindful of the consequences of these assessments.

In the Philippines, addressing varied student reading competencies has been a priority for the Department of Education, which introduced the Phil-IRI. This program is a classroom-based assessment tool administered by the Department of Education (DepEd) to measure and describe learners' reading performance in English and Filipino (Pelagio, 2025). The program is part of Every Child is a Reader Program, which aims to make every Filipino child a reader and writer at their grade level. The Phil-IRI assesses oral reading, silent reading, and listening comprehension to determine learners' independent, instructional, and frustration levels. Tolibas (2025) noted that Phil-IRI provided educators with a reliable means to assess students' reading performance. The tool's ability to classify learners into independent, instructional, or frustration reading levels has provided insights into their strengths and areas for improvement.

Reading Intervention

Learning to read is a process that occurs so readily for some youngsters that it develops almost naturally. With minimal guidance and feedback, some students are on their way to recognizing the patterns of written words and inferring how the phonological system (sounds of language) maps to the complex orthography (written system). However, for other students—anywhere from 40 to 65 percent—the task of learning to read is much more challenging. If these students do not receive highly explicit instruction with additional opportunities for implicit learning, difficulties in learning to read proficiently are likely to be inevitable. These more challenging readers are the ones who require the most knowledgeable and skillful teachers (Vaughn & Fletcher, 2021). Understanding the instructional needs of children with specific reading disabilities is a primary concern of educators and researchers. Immediately after a child is diagnosed with reading problems, teachers must start planning interventions for them (Ahmad et al., 2022).

In the 2018 PISA, 15-year-old students in the Philippines placed last in reading competency among all participating nations and territories, with only 19% meeting the minimum proficiency level (Level 2). This distressing statistic highlights the urgent need to investigate the various factors contributing to Filipino learners' poor reading performance, particularly the effectiveness of treatments aimed at addressing this issue (Lucas et al., 2021).

These struggling readers make it difficult to provide adequate instruction, and incorporating them into regular schools may result in illiteracy and emotional anguish. As a result, tailored training programs incorporating continual monitoring and evaluation of non-readers and slow readers are critical. Strategic interventions, particularly those customized for individuals experiencing difficulties during the implementation of Modular Distance Learning Modality, are critical to ensure that learning becomes meaningful and the overall quality of education is improved (Libre III & Decano, 2021).

Reading intervention can be fundamental for many students to achieve success and improve their academic performance. It helps students become confident and skilled readers. As cited by Manuel (2018), many studies demonstrated the effectiveness of early elementary reading interventions. Across demographics and research designs, peer-reviewed literature consistently supports the use of these therapies, with no negative consequences reported. Targeted support is particularly beneficial to struggling readers. As previously said, preventing reading challenges in the early grades is significantly more successful than correcting them once they have developed.

WERPA as Reading Intervention

WERPA is a reading intervention designed to improve and ultimately enhance the reading proficiency

level of JHS students. It was part of the BNHS Continuous Improvement Plan (CIP) for the school year 2018 - 2019. However, due to the occurrence of COVID-19, the program has been temporarily suspended. WERPA utilizes the Department of Science and Technology (DOST) Learning English Application for Pinoys (LEAP), an electronic learning or e-learning software program, to help develop English language skills among individuals. The DOST, in collaboration with the University of the Philippines Diliman, developed the DOST LEAP, a computer-based language training software. This program is specifically designed to help high school and college students improve their English proficiency, particularly for careers in the Business Process Outsourcing (BPO) industry.

DOST LEAP consists of two main components. The first is the Language Training Program, which covers essential topics such as grammar, vocabulary, tenses, pronouns, prepositions, and idioms to help users build a strong foundation in English skills. The second component is the Speech Training Program, which targets common speech lapses among Filipinos to improve pronunciation, fluency, and clarity in spoken English.

The Speech Training Program focuses on several key areas. First, pronunciation correction helps users identify and fix common mispronunciations, such as the confusion between /f/ and /p/ sounds (e.g., saying "pish" instead of "fish"), /v/ and /b/ sounds (e.g., "bery" instead of "very"), and the proper pronunciation of words with silent letters (e.g., "often" pronounced as "offen"). Second, accent neutralization aims to reduce strong local accents that may hinder comprehension in professional settings, especially in BPO or call center roles. Lastly, intonation and stress training guides users on appropriate sentence rhythm and stress patterns, helping make speech more natural and expressive.

In addition, the program emphasizes fluency development by providing exercises that promote smoother speech and reduce hesitation markers such as "uhm" and "ah". Listening and Speaking Practice is also included, where users listen to native speakers, mimic their pronunciation, and compare recordings for self-assessment. The entire program is self-paced and designed for independent learning, allowing users to refine their spoken English skills without the need for an instructor.

As a stand-alone training system, DOST LEAP does not require an internet connection to function. Its primary goal is to enhance the English communication skills of Filipinos, making them more competitive in industries where strong language proficiency is essential.

The increased availability of technology-supported reading resources has opened the prospect of using digital materials to support adolescents in their reading and motivation. A literature search yielded several studies on the efficacy of technology-supported interventions in the classroom. For example, in a U.S.-based study examining how Nook e-readers influence 15-17-year-old student attitudes toward reading, showed that utilizing e-readers for extended quiet reading was particularly advantageous for self-identifying "reluctant readers" (Lynne, 2021). The LEAP course program is a 200-hour English training software that has two modules on grammar and vocabulary, and speech (DOST, 2015). This technology aims to improve the knowledge and skills of the participants in English proficiency in speech, grammar, and vocabulary. LEAP is also designed to improve the end-user's proper pronunciation, diction, articulation, accent, and fluency in English.

Chapter III
METHODOLOGY
Research Design

The researcher used a quasi-experimental pretest-posttest design without random assignment, which was

particularly appropriate for school-based interventions such as WERPA. In the context of BNHS, where students are already organized into intact classes and participation in remediation programs is predetermined, random assignment is neither feasible nor ethically practical. This design enabled the researcher to measure the causal effect of the WERPA on JHS students' reading ability by comparing their performance before and after the intervention using the same learners.

Many experts agree that this design is a good way to do research. Donald T. Campbell and Julian C. Stanley, who are well known for their work on quasi-experimental research, say that this type of design is especially useful when you're doing research in the real world where one cannot control everything. In their important book, Experimental and Quasi-Experimental Designs for Research, they explain that even if you can't randomly assign people to groups, you can still determine whether one thing causes another (Creswell & Creswell, 2022). This is especially true if you measure things before and after you make a change, so you can see how things change over time.

Quasi-experimental designs are useful in educational research, particularly when interventions affect existing groups (Marina, 2012). According to Creswell, pretests and posttests allow for reliable measurement of changes caused by an intervention (Jusniar, 2023). This study used that approach to assess changes in reading comprehension and word recognition in school-based, non-randomized groups. The design facilitated within-group comparisons, clarifying the intervention's influence on students' reading levels and offering insights for informed educational decision-making.

Research Sampling

In this study, the sampling procedure was carefully designed to ensure that the selected participants accurately represented the target population and were appropriate subjects for evaluating the effectiveness of WERPA. The research focused on JHS students enrolled at BNHS during the academic year 2022–2023. BNHS is a public secondary school under the Division of the City of Mati. It served a diverse student population who came from different barangays and elementary schools, providing a varied educational background that enriched the context of the study. The total JHS number of Phil-IRI pretest takers at BNHS during the study period was 597 students, comprising 261 males and 336 females.

To identify the sampling frame, all JHS students were first assessed using the Phil-IRI Pretest. This standardized tool evaluated the students' reading proficiency in terms of word recognition and reading comprehension. Based on the results, students were categorized into three levels of reading proficiency: Independent, Instructional, and Frustration. For the purposes of the study, the primary focus was on those who fell under the Frustration Level, as these students demonstrated significant reading difficulties and were in most need of intervention. A total of 209 students—121 males and 88 females—were identified as Frustration Level readers, representing approximately 35% of the total JHS population. These students comprised the accessible population for the intervention and became the study's final sample.

To ensure fair and balanced representation across all grade levels, the study employed a stratified sampling technique. Stratified sampling was chosen for two key reasons. First, it ensured that each grade level—from Grade 7 to Grade 10—was adequately represented, which was essential in answering one of the research objectives: to determine at which grade level WERPA was most effective. Second, stratification accounted for demographic variability, such as age, developmental stage, and academic maturity, which might have influenced students' responsiveness to the intervention. Within each grade-level stratum, students who met the specific inclusion criteria—those classified under the Frustration Level based on the Phil-IRI Pretest—were purposively selected to participate in the study.

This sampling approach was both practical and methodological. It was methodological because it allowed comparisons of WERPA's effectiveness at different levels of education. It was, however, practical because it adapted and reflected the manner in which the school carried out its remediation programs. Because the intervention was part of BNHS's Continuous Improvement Plan, all students who were identified as being at the frustration level were mandated to be included in the reading program. The research aspect was narrowed down to the analysis of the outcomes based on this pre-determined population of participants. The final sample consisted of 209 students in the following numbers: 58 students in Grade 7, 53 students in Grade 8, 55 students in Grade 9, and 43 students in Grade 10. Not only did the division ensure thorough analysis, but it also corresponded with the trend of reading difficulties being more common in lower grades.

This sampling technique guaranteed the validity of the results that formed a solid foundation for assessing the effectiveness of WERPA as a reading intervention. It facilitated the purpose of the study of ascertaining effectiveness at various grade levels and how early school experiences and demographic variables could impact reading development.

Research Instrument

The research utilized the Phil-IRI tool as the primary research instrument to assess and evaluate the reading proficiency of JHS students before and after the implementation of WERPA. Developed and standardized by the DepEd, the Phil-IRI is specifically designed to measure students' abilities in word recognition and reading comprehension (Pado et al., 2018). It was used in two phases: as a diagnostic tool through a pretest and as an evaluative tool through a posttest. The Phil-IRI pretest was administered at the beginning of the study to establish a baseline reading level for each student, identifying those performing at frustration, instructional, or independent levels. This initial assessment allowed the researcher to determine the appropriate participants for the intervention, particularly those at the frustration level. After the intervention program WERPA, the Phil-IRI posttest was conducted to evaluate the effectiveness of the reading strategies implemented. By comparing the pretest and posttest scores, the researcher was able to measure the gains or improvements in students' reading skills.

Phil-IRI includes group screening tests for Grades 7 to 10, which are composed of reading passages followed by multiple-choice questions that assess literal, inferential, and critical comprehension skills. These passages are age-appropriate and culturally relevant, ensuring reliability and alignment with the curriculum. Furthermore, the instrument allowed data-driven analysis by providing quantifiable results that helped guide conclusions and recommendations.

Data Gathering Procedure

The data gathering process began after the researcher obtained ethical clearance from the DOrSU-University Research Ethics Board (UREB), confirming that the study met the necessary ethical standards and was authorized to proceed. After which, a formal request letter was submitted to the Schools Division Superintendent of the Department of Education, Mati City Division. After securing the approval, a second request letter, together with the superintendent's guarantee letter, was forwarded to the principal of BNHS, where the research was to be conducted.

After administrative clearance, the researcher collaborated with the school principal and English department teachers to explain the purpose and nature of the study. The school mandated that all JHS students who were labeled at the Frustration Level according to their Phil-IRI pretest scores be included in a reading intervention program, such as WERPA, and other reading strategies. This need served as a

remedial strategy to enhance their reading comprehension and word recognition abilities as a part of the school's continuous improvement initiative.

But whereas joining the intervention was compulsory to avail of education assistance, parents or guardians and students were allowed to consent or refuse permission for the researcher to use their reading test scores and progress records for research purposes to ascertain the effectiveness of the WERPA program. This was assured by a Parental Consent Form and Informed Consent Letter, which informed the participants explicitly about the voluntary character of involvement in the research component of the study, the right to privacy, and the privilege to withdraw at any time. The implementation of the study was conducted in three main stages. During the pre-implementation stage, all identified students took the Phil-IRI pretest, which assessed their current levels of reading comprehension and word recognition. The results were used to determine who fell under the Frustration Level and thus qualified for the intervention. In the implementation stage, those classified under the Frustration Level were enrolled in the WERPA reading intervention, which used the LEAP software. This 200-hour English training program focused on enhancing students' grammar, vocabulary, speech, pronunciation, diction, articulation, and fluency. Sessions were held in the SHS and JHS computer laboratories—equipped with 50 functional desktop computers—from Monday to Thursday (3:30–5:00 PM) and for the entire day on Friday, over the course of five weeks, with extensions available upon request. The sessions were facilitated by trained reading coordinators and language teachers. Finally, in the post-implementation stage, students were reassessed using the Phil-IRI posttest. The pretest and posttest scores were compared to evaluate the effectiveness of the WERPA program in improving the reading skills of the participants.

Once all data were gathered, the researcher analyzed the results and prepared conclusions and recommendations regarding the impact of the intervention on JHS students' reading comprehension. All ethical standards were strictly observed throughout the process, particularly with respect to the rights, consent, and confidentiality of the student participants.

Statistical Treatment of Data

The data collected in this study were analyzed using both descriptive and inferential statistical tools appropriate for the research design and objectives.

Frequency distribution was used to identify and describe the number of JHS students classified under the Frustration Level in both word recognition and reading comprehension, as determined by the Phil-IRI Pretest results. This statistical tool allowed the researcher to organize raw data into meaningful categories, such as grade level and gender, and to present how often each category occurred. Through frequency counts, the researcher was able to clearly identify the total number of students experiencing reading difficulties and describe their distribution across different groups.

Percentage distribution was employed alongside frequency to express the proportion of students classified under the Frustration Level relative to the total population. This tool made the data more interpretable by converting raw counts into percentages, which allows easier comparison across groups. For instance, it helped determine what portion of the total JHS population required reading intervention, which provided a clearer picture of the severity and prevalence of reading difficulties among students.

Mean (Average). The mean was used to determine the average reading scores of students in both the pretest and posttest assessments. This measure of central tendency provided a summary of students' overall performance in reading recognition and comprehension. By comparing the mean scores before and after the WERPA intervention, the researcher was able to assess whether there was an improvement in students' reading ability and identify which grade level demonstrated the highest gains.

Standard Deviation (SD). Standard deviation was utilized to measure the variability or dispersion of students' reading scores from the mean. This statistical tool helped determine how consistent or varied the students' performances were within each grade level. A decrease in standard deviation from pretest to posttest indicated that students' scores became more consistent after the intervention, suggesting that the WERPA program contributed not only to improvement but also to uniformity in reading performance. Additionally, mean and standard deviation were calculated to contrast reading achievement across grade levels, thereby establishing the grade level where WERPA was most effective.

Further, the Wilcoxon Signed-Rank Test was utilized to analyze the efficacy of the WERPA intervention. The non-parametric test was appropriate for testing the difference between paired pretest and posttest scores for the same group of students, given that the data did not follow a normal distribution. It analyzed the direction and magnitude of differences between scores to evaluate whether the WERPA intervention led to statistically significant improvements in reading comprehension and word recognition.

Lastly, the Chi-square Test of Independence was applied to assess whether there was a significant relationship between students' reading performance and selected categorical variables, such as their elementary school background and study habits. These inferential statistical tools provided a comprehensive analysis of the data and supported the study's objective of evaluating the impact and effectiveness of the reading intervention program.

Ethical Considerations

The study was conducted with utmost ethical research concern, particularly as it involved minor participants. Prior to data collection, the complete research protocol—including objectives, methodology, sampling procedures, intervention plan, data collection instruments, and statistical treatment—was reviewed and approved by the Davao Oriental State University (DOrSU) – University Research Ethics Board (UREB). The approved protocol also included provisions for risk minimization, confidentiality, and proper data management.

Participation in data collection was entirely voluntary. Although identified JHS students were required by BNHS to undergo the reading intervention as part of its CIP, their inclusion in the study was not mandatory, which gave them the autonomy to withdraw from the study at any time during data collection without penalty.

Before commencing the study, formal clearance was obtained from the Department of Education – Schools Division of the City of Mati in a letter addressed to the Schools Division Superintendent (SDS). After approval, the school administrator was followed up with a letter along with the endorsement of the superintendent. For ethical reasons, informed consent was obtained through a signed Parent's Consent Form and Student Assent Forms prior to participation. These documents clearly explained the purpose of the study, procedures involved, potential risks and benefits, and the rights of the participants, including confidentiality and withdrawal, and as to what type of information was to be collected.

The researcher ensured strict adherence to data privacy and confidentiality protocols to prevent deception throughout the study. Participant selection adhered to predetermined criteria, and no undue influence was exerted on respondent selection to ensure data integrity. JHS research participants, including their parents and guardians, were informed of the study's purpose as well as their right to withdraw or decline participation in the data collection once they experienced distress as a result of the intervention. The informed consent process highlighted confidentiality, anonymity, and restricted data access to prevent unauthorized disclosure of data. Personal information was managed with the highest level of confidentiality and accessed only whenever necessary. Consent forms were completed and submitted prior

to participation. Participants were informed of the potential benefits of the study, including improvements in reading intervention strategies. Findings and educational implications were communicated to students to address any challenges encountered during the research.

Finally, the researcher assumed full responsibility for the authorship of this work. All sources were properly cited, and academic integrity was upheld throughout the research process.

Chapter IV
RESULTS AND DISCUSSIONS

Reading comprehension is a critical skill that influences students' performance in all subjects. Nevertheless, a percentage of the JHS students were weak readers, especially in word recognition and reading comprehension. WERPA was implemented at BNHS and focused on students who had been assessed at the Frustration Level in reading comprehension based on Phil-IRI Pretest results. The objectives of the study were to determine the effectiveness of the WERPA in enhancing the reading ability of learners and to examine the correlation between attendance at primary schools and reading practices. The results were presented in accordance with four key objectives of the study.

To address the first objective—to determine the number of JHS students who belonged to the Frustration Level in reading comprehension based on the Phil-IRI pretest assessment—an analysis was made of the test scores of students who were studying at BNHS. Table 1 shows the breakdown of these students by grade level and gender.

Table 1. Distribution of Junior High School Students under Frustration Level in Word Recognition and Reading Comprehension Based on Phil-IRI Pretest Result by Grade Level and Gender

Grade Level	Male	Female	Total
7	32	26	58
8	27	26	53
9	34	21	55
10	25	18	43
Total	118	91	209

Based on the Phil-IRI Pretest administered at BNHS, 209 JHS learners were identified as being at the Frustration Level in both word recognition and reading comprehension. Table 1 shows that 118 of these students were male and 91 were female, with Grade 7 having the most students (58) and Grade 10 having the fewest (43). This tendency implied that reading difficulties were more widespread in lower grade levels, which may reflect the shift from primary to secondary education.

This study emphasized the importance of targeted intervention at an earlier stage to address foundational reading difficulties. The higher prevalence of reading difficulties in lower grade levels highlighted the critical transition from primary to secondary education, during which learners frequently encountered increased academic demands without proper literacy foundations (Akyol & Boyaci-Altinay, 2019). Furthermore, Amri et al. (2021) noted that the higher proportion of male students experiencing frustration mirrored ongoing gender differences in reading performance reported globally.

The second objective of the study focused on determining the students' reading comprehension before and after the implementation of WERPA at BNHS. To evaluate this, the Wilcoxon Signed-Rank Test was used

as a non-parametric statistical method to assess whether the differences in reading scores between the pretest and posttest were statistically significant. The results are summarized in Table 2.

Table 2. Wilcoxon Signed-Rank Test Results Between Pretest and Posttest Scores in Comprehension and Recognition Accuracy

Paired Variable	Wilcoxon W	P Value	Effect Size (RBC)
Pretest vs. Posttest Comprehension	157	< .001	-0.977
Pretest vs. Posttest Recognition	2043	< .001	-0.687

Note. H_a: μ pretest < μ Posttest; RBC- (Rank Biserial Correlation)

Table 2 shows the alternative hypothesis, H_a: μ Pretest < Posttest, posited that the scores in the posttest were significantly higher than those in the pretest. This directional hypothesis suggested improvement or a positive effect after an intervention or instructional period.

In the results, both comprehension level and recognition accuracy showed statistically significant improvements with p-values less than .001, strongly supporting H_a. The negative effect sizes (−0.977 for comprehension and −0.687 for recognition accuracy) further indicated that most posttest scores were higher than the corresponding pretest scores. [a] 42 pair(s) of values and 46 pair(s) were tied in the Wilcoxon signed-rank test. Tied pairs occur when the pretest and posttest scores for a participant are exactly the same, meaning there was no change in performance for that individual. Thus, for comprehension level, there were 42 tied pairs ([a]) while for recognition accuracy, there were 46 tied pairs ([b]).

These ties were excluded from the ranking process in the Wilcoxon test because the test only considered the magnitude and direction of non-zero differences between paired scores. Although tied scores did not contribute to the test statistic, their presence was still important to note. A relatively high number of ties might indicate that some students did not experience change, either due to already high performance (ceiling effect), lack of engagement, or other external factors.

Despite the ties, the results still showed highly significant improvements ($p < .001$) and strong effect sizes, which suggested that majority of participants had improved and that the ties did not diminish the overall effectiveness of the intervention.

The Wilcoxon Signed-Rank Test was employed statistically to establish if there was a significant difference between two related groups—specifically, the students' performance before and after WERPA. The results revealed that the reading intervention considerably enhanced JHS students' reading skills, as indicated in the comparison of their pretest and posttest scores. The research found a significant improvement in both reading comprehension and word recognition accuracy, with p-values less than .001 in both cases.

The results revealed that the WERPA considerably enhanced JHS students' reading skills, as indicated in the comparison of their pretest and posttest scores. The research found a significant increase in both reading comprehension and word recognition accuracy, with p-values less than .001 in both cases. Reading comprehension showed a very substantial effect size ($r = -0.977$), indicating a considerable favorable influence of the intervention. Similarly, recognition accuracy significantly improved, with a considerable impact size ($r = -0.687$). These data revealed that WERPA was highly effective in improving

pupils' reading skills. The statistically significant improvements supported the conclusion that the program was an effective and practical approach to promote literacy development among JHS students.
The results of the Wilcoxon Signed-Rank Test contradicted this hypothesis. The extremely low p-values and large effect sizes provided strong evidence that students' reading comprehension and word recognition improved significantly after the WERPA intervention. Therefore, null hypothesis 1 was rejected. The WERPA reading program had a significant and positive effect on students' reading performance, confirming its effectiveness as a reading intervention.
The statistically significant progress in reading comprehension and word recognition following the WERPA intervention were reliable with recent studies that emphasized the effectiveness of structured, evidence-based reading programs in enhancing literacy outcomes among struggling secondary students (Wanzek et al., 2018). Stevens et al. (2021) also added that these findings were aligned with studies that underscored the utility of repeated, targeted instruction in driving measurable gains in reading skills over relatively short periods.
Furthermore, the third objective, which sought to determine the grade level at which WERPA was most effective, was explained through the comparison of mean scores and standard deviations before and after the intervention. The results revealed that recognition accuracy improved at all grade levels. However, Grade 7 demonstrated the greatest improvement, with scores rising by 2.9 points—from 93.1 to 96.0. This improvement was followed by a significant drop in standard deviation, showing increased consistency in student performance. While the other grade levels showed significant improvement, the gains were smaller. These findings suggested that the WERPA was especially beneficial for Grade 7 pupils, most likely due to their developmental stage and openness to basic reading interventions. In the study where developed remedial instructional materials specifically designed for Grade 7 learners with reading difficulties yield results that targeted remediation significantly enhanced students' word recognition and reading comprehension, indicating that learners at this developmental stage respond positively and rapidly to structured literacy interventions (Aquino & De Vera, 2018). Another study examined Grade 7 students in Makati and confirmed that poor reading comprehension directly impacted academic performance among students. The study emphasized that remediation at Grade 7 is critical because learners are still flexible in acquiring foundational literacy skills (Buraga, 2025). Moreover, Webber et al., (2023) found that reading motivation and engagement decline from childhood to adolescence, with current levels among adolescents at an all-time low. This decline makes reading more difficult for older students who lack intrinsic motivation. Thus, delivering reading interventions during the early years is critically important for learners' literacy development.
In line with the third research objective, which aimed to determine the grade level at which the WERPA intervention was most effective, Table 4 presented a comparison of students' recognition accuracy scores before and after the program, categorized by grade level. By examining the changes in mean scores and standard deviations, the table highlighted the degree of improvement and consistency in reading performance across Grades 7 to 10.

Table 3. Mean Scores, Standard Deviations and Changes in Reading Level Based on Pretest and Posttest Recognition Accuracy by Grade Level

Grade Level	Pretest M	Pretest SD	PosttestM	Posttest SD	Change in RL	Remarks
7	93.1	0.050	96.0	0.033	2.9	Increase

8	94.2	0.039	96.6	0.025	2.4	Increase
9	94.0	0.037	96.0	0.036	2.0	Increase
10	94.0	0.047	96.0	0.033	2.0	Increase

Note. M = Mean; SD = Standard Deviation; RL= Reading Level.

Table 3 presents the mean scores and standard deviations of students' recognition accuracy in reading before and after the intervention across Grades 7 to 10. The results revealed a consistent improvement in reading levels across all grade levels, as evidenced by the increase in mean scores from pretest to posttest. This pattern indicates that the intervention positively influenced students' ability to accurately recognize words, which is a foundational component of reading proficiency.

Specifically, Grade 7 demonstrated the largest improvement, with the mean score increasing from 93.1 in the pretest to 96.0 in the posttest, representing a 2.9-point gain. This indicates that students at the early stage of JHS may respond more strongly to targeted reading interventions. The reduction in standard deviation from 0.050 to 0.033 further suggests that students' performance became more consistent after the intervention. Similar improvements were observed in Grade 8, where the mean increased from 94.2 to 96.6 (a gain of 2.4 points), accompanied by a decrease in variability from 0.039 to 0.025. In Grades 9 and 10, both groups exhibited a 2.0-point increase in mean scores (from 94.0 to 96.0). While Grade 9 showed minimal change in variability (0.037 to 0.036), Grade 10 demonstrated a noticeable reduction in standard deviation from 0.047 to 0.033, indicating more stable reading performance after the intervention.

Overall, the results indicate a clear upward trend in reading recognition accuracy across all grade levels, suggesting that the implemented intervention was effective in strengthening students' foundational reading skills. Improvements in word recognition are particularly important because accurate decoding and recognition skills directly contribute to reading fluency and comprehension development among secondary learners.

These findings are consistent with recent research emphasizing the effectiveness of structured reading interventions for struggling adolescent readers. Capin et al., (2022) reported that explicit and systematic reading interventions significantly improve decoding accuracy and word recognition among middle school learners with reading difficulties. Their study highlighted that structured literacy programs implemented within multi-tiered instructional frameworks can produce measurable gains in students' reading outcomes. Similarly, Cho et al., (2023)found that targeted reading interventions focusing on foundational skills—such as word recognition, decoding, and vocabulary—lead to significant improvements in reading accuracy and comprehension among secondary students. Their findings emphasize that consistent and scaffolded literacy instruction enables struggling readers to close learning gaps even at the secondary level.

The relatively higher improvement observed among Grade 7 students may be attributed to developmental factors. Early secondary learners are still consolidating their foundational literacy skills and therefore tend to be more responsive to structured reading support. Research suggests that timely intervention during the early years of secondary education prevents reading difficulties from becoming more persistent and difficult to remediate.

Regarding the fourth research objective, Chi-square analysis revealed no significant associations between recognition accuracy and the categorical variables of elementary school attended and study habits in both the pretest and posttest results. This finding suggests that the observed improvements in reading recognition accuracy were primarily driven by the intervention rather than by students' previous educational background or individual study routines.

However, a significant relationship was found between reading comprehension levels and elementary school background after the intervention ($\chi^2 = 22.5$, df = 6, $p < .001$). This indicates that students' earlier schooling experiences may influence how effectively they respond to reading interventions, particularly in terms of comprehension development.

Despite moderate effect sizes, the lack of a significant relationship between study habits and comprehension outcomes implies that structured literacy interventions such as WERPA may have a stronger influence on reading performance than variations in students' personal study habits. This aligns with findings by (Martin et al., 2020) which suggest that direct and systematic reading instruction often outweighs external factors when improving literacy outcomes among struggling readers.

Overall, the consistent improvements across grade levels highlight the effectiveness of the intervention in enhancing students' word recognition accuracy and reinforcing foundational reading skills among JHS learners.

Table 4. Chi-square Test Results Between Recognition Accuracy and Grouping Variables in Pretest and Posttest Assessment

Predictor Variable	Time Point	χ^2	df	P	ε^2
Elementary School	Pre	33.1	30	0.32	0.1605
	Post	19.2	30	0.936	0.0931
Study Habits	Pre	5.22	6	0.516	0.0253
	Post	9.2	6	0.163	0.0447

Note. χ^2 = chi-square value; df = degrees of freedom; p = significance value; ε^2 = effect size; Pre = pre-intervention; Post = post intervention.

Table 4 presents the results of chi-square tests that examine the relationship between students' recognition accuracy and two variables—elementary school attended and their study habits—throughout the pretest and posttest phases of the WERPA intervention. The analysis revealed no significant relationship between recognition accuracy and either of the covariates, as all p-values were greater than 0.05. The relationship between pre-recognition accuracy and elementary school yielded a p-value of 0.32 ($\chi^2 = 33.1$, df = 30), while the post-recognition accuracy showed an even weaker link with a p-value of 0.936. Pretest and posttest p-values were 0.516 ($\chi^2 = 5.22$, df = 6) and 0.163 ($\chi^2 = 9.2$, df = 6) respectively, which conveyed no significant relationship between study habits and recognition accuracy. While some minor to moderate effect sizes (ε^2 ranging from 0.0253 to 0.1605) were observed, they were insufficient to establish meaningful correlations. These data suggested that neither the students' elementary school experience nor their study habits had a significant impact on their recognition accuracy, and that the observed improvements in reading skills were most likely attributable to the WERPA intervention itself.

The p-values were greater than 0.05, which indicated there was no statistically significant relationship between students' elementary school and their recognition accuracy (before and after the intervention). The effect sizes (ε^2) were small to moderate (0.16 pre-intervention, 0.093 post intervention), suggesting that elementary school might have had a small influence, but it was not strong or significant. The chi-square results revealed no significant relationship between recognition accuracy and either the students' elementary school background or their study habits, both before and after the intervention. While small effect sizes were observed—particularly for elementary school—these associations were not sufficient to indicate a meaningful influence on students' reading performance.

The lack of significant associations between recognition accuracy and students' elementary school background or study habits aligns with recent research suggesting that structured reading interventions have a greater impact on literacy outcomes than external factors such as prior school affiliation or individual study routines (Vaughn & Fletcher, 2021). Additionally, the small effect sizes observed support findings that, while background variables may have contributed slightly, the primary driver of improvement in reading skills was the systematic instructional approach embedded in the WERPA program itself (Çiğdemir and Akyol (2022).

To further address the fourth research objective, which aimed to explore potential associations between students' reading performance and external factors, Table 5 presents the Chi-square test results examining the relationship between comprehension levels and two predictor variables: elementary school background and study habits. The analysis was conducted for both pretest and posttest data to determine whether these variables were significantly associated with changes in comprehension following the WERPA intervention.

Table 5. Chi-square Test Results on the Association Between Comprehension Levels and Elementary School and Study Habits before and after Intervention

Predictor Variable	Time Point	χ^2	Df	P	ε^2
Elementary School	Pre	11.3	6	0.081	0.0547
	Post	22.5	6	< .001	0.1091
Study Habits	Pre	23.5	30	0.792	0.114
	Post	24.5	30	0.749	0.119

Note. χ^2 = chi-square value; df = degrees of freedom; p = significance value; ε^2 = effect size; Pre = pre-intervention; Post = post intervention. Values reflect associations between comprehension levels and each predictor variable measured at two time points.

The table exhibited the results of chi-square tests which showed the relationship between JHS students' comprehension level and the connection between two categorical variables: elementary school attended and their study habits, before and after the intervention. There was no significant correlation between pre-intervention comprehension skills and primary school background ($\chi^2 = 11.3$, df = 6, p = 0.081). However, the p-value was somewhat higher than the usual significance level, which stipulated a moderate inclination toward a putative link. After the intervention, there was a significant association between post-comprehension levels and primary school affiliation ($\chi^2 = 22.5$, df = 6, $p < 0.001$), which indicated increased differences in comprehension levels between schools. Prior to the intervention, the association between comprehension level and primary school was not statistically significant (p = 0.081), but it was close to the 0.05 threshold which showed a little influence. After the intervention, a significant connection was found ($p < 0.001$), with a moderate effect size ($\varepsilon^2 = 0.1091$). This suggested that the elementary school a student had attended may have influenced their development in comprehension following the program. The results indicated that students' elementary school background played a significant role in their post-program comprehension levels, this highlighted how school background might have affected the extent to which students benefited from such interventions. In contrast, study habits showed no significant relationship with comprehension levels either before or after the intervention, despite moderate effect sizes, which suggested that other factors may have better account for the observed changes in comprehension level.

To explore the relationship between students' background variables and reading performance, chi-square tests were conducted. Table 4 and Table 5 showed the association between reading skills and the elementary school attended and study habits, both before and after the intervention. Results showed no significant association was found between recognition accuracy and either elementary school or study habits, as indicated by p-values > 0.05. However, there was a significant post-intervention relationship between comprehension scores and elementary school background ($\chi^2 = 22.5$, df = 6, $p < 0.001$), suggesting early schooling may have impacted how students benefited from the program.

The findings showed no significant relationship between students' reading levels and their study habits, both before and after the intervention. Therefore, that part of the null hypothesis was accepted. However, a significant relationship was found between students' post-intervention comprehension levels and their elementary school background, as indicated by the chi-square test. This suggested that early educational experiences may have influenced how effectively students responded to reading interventions. Therefore, null hypothesis 2 was partially rejected.

There was a significant relationship between reading comprehension and students' elementary school background, but not with their study habits. The substantial post-intervention relationship between comprehension levels and elementary school affiliation supported the notion that earlier educational experiences could have influenced pupils' receptivity to reading interventions (Martinez, 2023). In contrast, Melon et al. (2025) claimed that the absence of substantial associations between study habits and comprehension was consistent with research indicating that structured instructional programs frequently have a greater impact on reading results than individual student actions.

These findings further contextualized the outcomes presented in Table 6, which displayed the post-intervention reading levels of JHS students across grade levels. The distribution highlighted how learners progressed from the Frustration Level to either Instructional or Independent Level, which presented a comparative view of the effectiveness of the WERPA across Grades 7 to 10.

Table 6. Distribution of Students' Reading Levels by Grade Based on Posttest Results

Reading Level	Grade 7	Grade 8	Grade 9	Grade 10	Total
Frustration	24	14	24	17	79
Independent	20	16	19	12	67
Instructional	15	21	18	14	68

Note. The table presents the number of students in Grades 7 to 10 categorized by their posttest reading levels: Frustration, Independent, and Instructional.

According to the study findings, posttest scores indicated a dramatic increase in students' reading ability at every grade level after the WERPA intervention. Of the 209 students initially classified at the Frustration Level in the Phil-IRI pretest, only 79 remained at this level after the intervention. The rest progressed up, with 68 at the Instructional Level and 67 at the Independent Level.

Grade 7 students showed the most notable improvement, with the highest number advancing to higher reading levels which confirmed the effectiveness of WERPA when implemented early in the JHS cycle. This aligned with the study's conclusion that early intervention plays a critical role in addressing foundational literacy challenges. The distribution of reading levels post-intervention also highlights that while not all students achieved full reading independence, a significant majority demonstrated measurable progress. These findings validated the WERPA program's effectiveness in enhancing reading

comprehension and word recognition and reinforced the importance of structured, technology-supported reading interventions in improving literacy outcomes among struggling readers.

The posttest results of the WERPA reading intervention indicated a marked improvement in the reading levels of JHS students, with a substantial number transitioning from the Frustration Level to either the Instructional or Independent Level. This improvement was most evident among Grade 7 students, suggesting that early intervention was particularly effective in addressing foundational reading challenges. These findings were reinforced by the meta-analysis conducted by Wanzek et al. (2016), which revealed that structured and targeted Tier 2 reading interventions in the early years of education yielded substantially higher advances in reading outcomes than those instigated later. These underscored those younger students, particularly in lower-grade levels, benefited more from systematic, intensive interventions that focused on both decoding and comprehension skills. This finding aligned with the current study's conclusions, which indicated that Grade 7 students demonstrated the greatest progress, underscoring the importance of introducing well-designed literacy programs at the beginning of secondary education. The success of WERPA further affirmed the need for school-wide, data-driven methods to enhance reading proficiency among functionally illiterate learners, especially when interventions were integrated early in their academic journey.

Chapter V
SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary

Reading is a critical skill that strengthens academic success and lifelong learning. However, most Filipino students still have problems with reading proficiency, as highlighted in national statistics and global assessments. Notably, the 2018 PISA results placed Filipino high school students at the bottom in reading comprehension among participating countries. In mitigation of this ongoing challenge, BNHS introduced WERPA, a reading intervention program aimed at enhancing students' word recognition and reading comprehension skills.

This study intended to evaluate the effectiveness of WERPA among JHS students at BNHS. It also explored whether students' reading performance was influenced by factors such as the elementary school they attended and their reading habits. Utilizing a quasi-experimental pretest-posttest design, the research focused on the identified students under Frustration Level based on the Phil-IRI pretest results, with Grade 7 showing the highest concentration of struggling readers.

After the intervention, students significantly improved in reading comprehension and word recognition at all grade levels. The largest improvement was noted among Grade 7 students, and this indicated the power of early intervention. Statistical tests confirmed that WERPA had a strong, positive effect on students' reading performance. Although the correlation between reading practice and improvement in reading was not found to be significant, elementary school background displayed a significant effect on post-intervention comprehension levels.

Based on the results, WERPA proved to be an effective reading intervention among JHS students especially in lower years. It reinforced the critical role of early and systematic interventions in reading and provided valuable lessons to teachers, school administrators, and policymakers who were committed to ensuring maximum literacy gains in the Philippine education system.

Conclusion

Based on the findings of the study, WERPA had a significant impact on the reading comprehension and

word recognition abilities of JHS students at BNHS. Statistical analysis using the Wilcoxon Signed-Rank Test revealed highly significant differences between pre- and posttest scores, with very large effect sizes for comprehension and for recognition, reflecting a strong and positive intervention effect. Among all grade levels, Grade 7 students showed the greatest improvement, indicating that early intervention was especially effective. This result supported the hypothesis that early literacy programs were more effective when implemented at the beginning of secondary education, a stage when students were more developmentally responsive to organized support.

In addition, the research identified that students' reading habits and study behaviors were not significantly related to reading skill improvement. Nonetheless, an interesting observation was the presence of a high correlation between the background of students in their elementary school years and their level of reading comprehension after the intervention. This suggested that initial learning experiences had the potential to affect how students responded to subsequent interventions, especially in comprehension tasks. Although WERPA was helpful at every grade level, it was most effective for younger students, affirming the worth of introducing reading interventions during the initial stages of academic development.

Despite the favorable findings, the study had its limitations. The lack of a control group in the quasi-experimental design limited its ability to attribute improvements solely to WERPA, as other uncontrolled variables might have influenced the outcomes. Moreover, the selection process of JHS students based on Phil-IRI results may have introduced selection bias, due to potential exclusion of students near the threshold of the frustration level. The used of the Phil-IRI tool, while standardized, mainly measured literal comprehension and word recognition, which limited insights into higher-order reading skills such as inference and critical thinking.

Another limitation stemmed from the relatively short duration of the WERPA, which lasted only five weeks. While significant increases were observed from the results, the long-term sustainability of these improvements remained unknown. In addition, the presence of tied scores in the Wilcoxon analysis indicated that some students had already reached the limit of what the Phil-IRI assessment could measure, which constrained further learning. The implementation also relied heavily on DOST LEAP software and computer lab access, which raised questions about technical equity, consistency of use, and student engagement throughout the sessions. Lastly, the study’s findings were context-specific, conducted only within BNHS and during a single academic year. As such, generalizability to other settings must be approached with caution, especially in schools with differing resources, demographics, or instructional practices.

Finally, although WERPA proved to be a powerful means of addressing reading gaps among JHS students, especially at early grade levels, its effect must be understood within the limits of its methodological constraint. Future research could utilize randomized controlled designs, investigate long-term effects, and incorporate qualitative observations to better understand the program's efficacy. Nevertheless, the results emphasized the significance of school-based, organized, and early reading interventions in promoting literacy skills development for struggling readers.

Recommendations

In light of the findings and concluded results from this study, it is strongly recommended that the WERPA reading intervention program be sustained and institutionalized across all JHS at BNHS and potentially adopted by other schools with similar student profiles. The program could have been implemented as early as possible to maximize its impact on foundational reading skills, given its clear effectiveness, especially

among Grade 7 students. Early intervention could have prevented learners from falling further behind as they progressed through higher grade levels.

A strong collaboration between elementary and high school teachers was suggested to promote continuity in reading instruction and early intervention, which helped in tracking students' reading progress and addressing gaps more effectively.

Although the study found no strong link between reading habits and reading performance, complementary programs that promoted a reading culture at home and in the community were still considered beneficial to support long-term literacy development. Lastly, continuous monitoring and evaluation of the program were recommended in order to maintain its effectiveness and make timely developments based on data. Further studies could have explored other factors that might have affected reading development to create more holistic and comprehensive interventions.

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