

## Reading comprehension and academic performance of students in science at Magsaysay National High School

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### Abstract

This study aimed to investigate the relationship between reading comprehension and science academic performance among junior high school students at Magsaysay National High School-Alibog Annex during the school year 2024–2025. The study adopted an exploratory sequential design. It consisted of two phases: a qualitative part through interviews with twelve (12) students to identify the difficulties encountered by students in reading comprehension, and a quantitative survey of one hundred thirty-seven (137) students to determine the extent of these identified difficulties. Phil-IRI results and students' final science grades were also analyzed to assess comprehension skills. The findings revealed that students commonly struggled with text structure, concentration, proficiency, and vocabulary knowledge. Among the four aspects, vocabulary knowledge demonstrated a significant effect on students' reading comprehension, while text structure and concentration significantly affected their academic performance. Most respondents were at the instructional reading level, indicating that they could understand texts with the instructor's assistance. The research also found a significant relationship between reading comprehension and academic performance in science. To address these difficulties, the researcher proposed a program known as READ UP (Reading Enhancement and Academic Development Uplifting Program), which includes *peer tutoring* and *motivational strategies*. This program aims to enhance students' reading comprehension and strengthen their motivation to learn. Generally, the study emphasizes that strengthening reading comprehension, particularly understanding text structure and maintaining concentration, can help students excel not only in science but also in other subject areas.

**Keywords:** reading comprehension, Phil-IRI, instructional reading level, academic performance, READ UP

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### 1. Introduction

In line with the DepEd Order 14, s. 2018: Policy Guidelines for the Administration of the Revised Philippine Informal Reading Inventory (Phil-IRI) were implemented on March 26, 2018. The Department of Education (DepEd) supports the Every Child a Reader Program (ECARP), which aims to teach every Filipino child how to read and write properly at their grade level. With the help of the Bureau of Learning Delivery-Teaching and Learning Division (BLD-TLD), the DepEd will continue to administer the Revised Philippine Informal Reading Inventory (Phil-IRI) assessment to students in public elementary schools across the country beginning in the 2018-2019 school year. The primary goal of these assessment methods is to measure the learner's level of independence, the need for instruction, and frustration. Students with strong reading comprehension can perform challenging science tasks, such as interpreting data, conducting experiments, and solving problems, thereby improving their academic achievement in science (Basheer et al., 2025). Reading abilities are essential to students' academic achievement, as they form the basis for learning across a variety of subject areas (Charity et al., 2004, as cited in Getachew & Joshi, 2025). Reading difficulties among junior high school students frequently result in lower academic performance throughout subject areas, particularly in science and mathematics (Abao, 2025).

As per DepEd Order 14, s. 2018, the DepEd itself mandated that every school submit an updated Phil-IRI report annually. Educators, particularly language teachers and reading coordinators, assess and measure students' skills in reading and comprehending words and sentences. To meet the requirements, the Magsaysay National High School-Alibog Annex also consolidates and updates its reports annually as per the DepEd's Memorandum. Meanwhile, last School Year, Magsaysay NHS-Alibog Annex had 193 Enrollees, and 184 of them, or 95 percent of Students, were Phil-IRI tested. In the Phil-IRI statistical results for the School Year 2023-2024, 95 out of 184 or 51 percent, of tested students are in the frustration level (students who struggled with reading); 28 percent, or 52 out of 184 of them are instructional (students who can read but need an instructor); and 38 out of 184 tested learners, or only 20.38 percent of them, are independent learners (they can read by themselves) (Magsaysay National High School-Alibog Annex, 2024). The findings indicate that a large number of evaluated learners are unable to read properly or have struggled with reading skills and comprehension.

The Data above indicate an increasing need for a research study on the difficulties students encounter in reading comprehension and their significant impact on academic achievement. The goal of this study is to investigate the relationship between reading comprehension and academic performance among science students at Magsaysay National High School - Alibog Annex. The findings will help identify learning gaps and make recommendations to improve both reading instruction and science teaching tactics.

**Statement of the Problem** - This study aimed to determine whether reading comprehension has a substantial impact on students' academic performance in science. Specifically, this study addressed the following questions: (1) What are the difficulties encountered by students in reading comprehension? (2) What is the extent of difficulties encountered by students in reading comprehension in terms of Text Structure, Concentration, Proficiency, and Vocabulary Knowledge? (3) What is the respondents' level of reading comprehension based on the Phil-IRI results? (4) What is the level of students' academic performance in science, based on their final rating? (5) Is there a significant relationship between the extent of difficulties encountered by students in reading comprehension and the level of reading comprehension based on Phil-IRI result? (6) Is there a significant relationship between the extent of difficulties encountered by students in reading comprehension and the level of academic performance of students in science? (7) Is there a significant relationship between the level of reading comprehension based on Phil-IRI result and the level of academic performance of students in science? (8) What

program can be proposed to improve the reading comprehension of the respondents and help them to achieve their enhanced academic performance in science?

**Significance of the Study** - This study provides essential contributions to the following personnel mentioned below. It demonstrates how reading comprehension affects students' academic performance, particularly in science, a subject that requires understanding of concepts, processes, and technical vocabulary. The findings may help students recognize the specific reading difficulties that hinder their learning, enabling them to develop stronger comprehension and Higher order thinking skills. As they improve their capability to process and organize scientific information, their academic performance and confidence across subjects are likely to increase. This study also provides teachers with a valuable insight into the literacy challenges students encountered when engaging with a science context. The study may help them refine their teaching strategies, integrate reading-based interventions, and create supportive instructional materials that help learners make sense of scientific texts. This ultimately leads to more effective teaching and improved student outcomes. Parents also benefit from this study, as it increases their awareness of their vital role in developing their children's reading skills. With an understanding of how reading comprehension influences academic success, parents are encouraged to support their children at home by providing guidance, monitoring, and a literacy-friendly environment. At the institutional level, the study provides schools and administrators with evidence to inform curriculum improvements, professional development plans, and literacy-centered programs. Understanding how reading abilities relate to science achievement encourages schools to develop programs and learning environments that promote deeper comprehension, improved academic performance, and increased student engagement. In addition, the findings of this study are valuable to DepEd Occidental Mindoro, the District Office, and the Local Government Unit (LGU), as they highlight literacy gaps that may influence science learning. These insights can guide resource allocation, division-wide reading initiatives, and community-based educational programs that enhance students' overall academic readiness. Moreover, agencies such as the Department of Science and Technology (DOST) may use the findings to enhance science education programs and scholarships by incorporating literacy support, recognizing that effective reading comprehension is essential for scientific learning, innovation, and future research careers. Finally, the study offers a useful starting point for future researchers by providing background data and a conceptual framework for further investigation of the relationship between reading comprehension and academic achievement. It supports new studies across subject areas, grade levels, and intervention approaches, thereby expanding evidence-based educational methods.

**Scope and Delimitation of the Study** - The main goal of this study is to examine the relationship between reading comprehension and academic performance of students in science at Magsaysay National High School – Alibog Annex during the School Year 2024–2025. It focused on identifying the difficulties students encounter in reading comprehension and determining which of these difficulties significantly affect their academic achievement. The respondents of the study were 137 junior high school students at Magsaysay NHS-Alibog Annex, from grades 7 to 10. The study was delimited to the variables of reading comprehension, specifically text structure, concentration, proficiency, and vocabulary knowledge, and how these related to students' academic performance in science as reflected in their grades. Other factors, such as socioeconomic background, parental involvement, teacher effectiveness, and access to learning materials, were not within the scope of this study. The final grade in science is the basis of a student's academic performance. Utmost confidentiality was observed, while a letter of request was sent to the office of the principal. The researcher sought the respondents' records for the study and used specific data necessary for the research. Furthermore, the study was limited to one public school; thus, the findings may not be generalized to other schools or broader populations without further investigation.

## 2. Methodology

**Research Design** - This study used an exploratory sequential design, a type of mixed-method research in which a qualitative phase was conducted first to explore a phenomenon, identify themes, and develop an instrument. It was followed by a quantitative phase, which measured the findings among a larger sample of

respondents. In this study, the qualitative phase was conducted first to identify the difficulties students encountered. In contrast, the quantitative phase is necessary to determine which of the identified aspects is the most difficult for reading comprehension. This method is most effective when researchers want to use qualitative insights to guide the quantitative phase, ensuring that surveys or questionnaires are grounded in participants' actual experiences, thereby enhancing the relevance and validity of the measurements (Vinevala et al., 2024). This method is helping to investigate the relationship between reading comprehension and academic performance in Science among Junior High School students at Magsaysay NHS–Alibog Annex. Using an exploratory sequential design, this study aimed to provide both a broad understanding through qualitative data and a deeper explanation through quantitative insights, resulting in a deeper understanding of how reading comprehension affects students' academic achievement in science.

**Respondents of the Study** - This study comprises two groups of respondents: those for the qualitative phase and those for the quantitative phase. The first group consists of qualitative participants, comprising 12 students from grades 7 to 10 (3 randomly selected from each grade). They participated in one-on-one interviews. Their responses provided personal insights, drawn from their experiences, to support and explain the quantitative findings. The remaining 125 students, together with the first 12 respondents, for a total of 137 respondents, served as respondents for the quantitative phase. Their data could help determine which reading difficulties students most commonly encounter. The data show 137 respondents from Grades 7 to 10, all of whom are students of Magsaysay NHS-Alibog Annex. Grade 10 has the highest number of students (42), followed by Grade 8 (37), Grade 7 (30), and Grade 9 (28). This distribution ensures that the sample represents students across all junior high school levels, providing a balanced perspective on reading comprehension and academic performance. The researcher employed simple random sampling to select participants from grades 7-10 (3 students per grade for the qualitative phase). Moreover, for the quantitative phase, the researcher used stratified random sampling based on the grade level of the students.

**Research Instrument** - This study used two sets of instruments to collect the necessary data. For the qualitative phase, the researcher first developed a semi-structured interview guide, a qualitative data-collection tool that uses a set of predetermined and open-ended questions. This method balances focus with flexibility, allowing researchers to obtain rich, in-depth insights (Shoozan & Shafiee, 2024). Moreover, the results from the qualitative phase were used to develop a researcher-made instrument. This instrument comprised four (4) major components: Text Structure, Concentration, Proficiency, and Vocabulary Knowledge. Each component included six (6) items, which were rated using a five-point Likert scale: 5-Always; 4-Often; 3-Sometimes; 2-Rarely; and 1-Never. The results in this survey were also used in correlation analysis to determine the relationship between reading comprehension difficulties and academic performance in science.

To ensure that the research instruments used in this study were valid and accurately measured what they were intended to measure, the expert validity of both the survey questionnaire and the interview guide was verified. The researcher-made questionnaire, used to measure the extent of students' difficulties in reading comprehension, was validated by five (5) experts from the graduate school department of the Divine Word College of San Jose. In addition, the Validation Review Form was used to ask for feedback and recommendations from the validators. Before the instrument was administered, the necessary modifications were made in response to their feedback. Meanwhile, to ensure the reliability of the research instrument used in this study, a reliability test was also conducted with thirty (30) JHS students from a nearby school, the Magsaysay NHS-Calawag Extension, who were asked to complete the validated questionnaire. It was designed to assess students' difficulties with reading comprehension, including text structure, concentration, vocabulary knowledge, and proficiency, using a five-point Likert scale. Each subcomponent has six (6) items. A split-half method was used, applying the Spearman-Brown Coefficient of equal length to assess the instrument's consistency. The computer-generated results of the reliability analysis disclose the following coefficients:

**Table 1**

*Result of Reliability Analysis*

Indicators	Number of Items	Reliability Coefficients*	Interpretation
1. Text Structure	6	0.88	High Reliability
2. Concentration	6	0.72	High Reliability
3. Proficiency	6	0.66	Moderate Reliability
4. Vocabulary Knowledge	6	0.70	High Reliability

\*Based on the coefficients of equal length

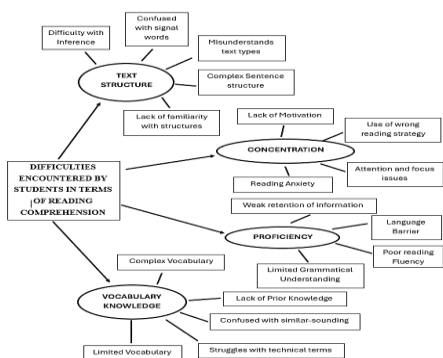
Based on the Spearman-Brown coefficients of equal length as disclosed in the table above, the coefficients reveal a generally high level of reliability. While one component is moderately reliable, the other three are highly reliable. The results attest to the instrument's acceptability among the final group of respondents.

**Data Gathering Procedure** - The data-gathering process began with securing permission from the school principal of Magsaysay NHS–Alibog Annex and coordinating with advisers and teachers, particularly the language teachers. Using the Learner Information System (LIS), the researcher identified qualified JHS students enrolled in SY 2024–2025. The study first conducted a qualitative phase by selecting twelve (12) students from Grades 7–10 for the face-to-face interviews. Data were gathered and analyzed thematically within five (5) days. A systematic survey questionnaire was developed based on the results of the first phase. A reliability test was then carried out with thirty (30) students from Magsaysay NHS–Calawag Extension. Revisions were also made based on their feedback before the validated questionnaire was administered during class hours, ensuring informed, voluntary, and confidential participation. Students were given 20–30 minutes to answer the test questionnaire. Afterward, completed surveys were checked for accuracy. Additional data, including Phil's IRI reading comprehension levels and students' final science grades, were collected from the reading coordinator and subject teachers over several days. For about 7–10 days, all data were encoded and analyzed statistically using frequencies, percentages, means, and Pearson correlations to examine the relationship between reading comprehension and academic performance.

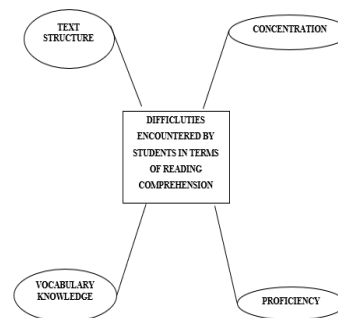
**Statistical Treatment of the Data** - To analyze the data collected across different variables, this study employed various statistical methods. Descriptive statistics helped present the data in a clear, organized manner and identify patterns in how reading behaviors relate to comprehension outcomes (Nurhayati & Najooan, 2023). In line with this, the current study also utilized Descriptive statistics to assess the level of difficulty in reading comprehension. Measures such as the mean, standard deviation, and weighted mean were used to describe students' responses regarding difficulties with text structures, concentration, reading proficiency, and vocabulary knowledge. The number of frequencies and percentage distributions were also used to assess and categorize students by reading skill (independent, instructional, or frustrated) and by academic success (as indicated by grades). The study also used a WarpPLS version. 7.0, a statistical software designed for Partial Least Squares-Structural Equation Modeling (PLS-SEM). To analyze the complex relationships among variables, the statistician used this method to determine how reading comprehension was related to academic success. Responses regarding the level of difficulty in reading comprehension were collected using a 5-point Likert scale.

**Ethical Considerations** - To protect the rights and well-being of each participant, this study abided by ethical research guidelines. Before the data collection process began, every participant, or their legal guardian if they were a minor, was asked for their informed consent. Respondents in this study were informed about the research's objective, process, and procedures; their right to refuse or withdraw at any time; and the measures taken to protect confidentiality. The collected data were also private and used solely for academic purposes. The data in this study were derived from investigations and were not directly copied from any existing studies. Meanwhile, the researcher used the American Psychological Association (APA) style. Any data or resources obtained from previous studies were properly cited to acknowledge the research used as references. The study aims to enhance education and would not compromise anyone involved in its conduct.

### 3. Results and Discussions



**Figure 1:** Initial thematic map of difficulties encountered by students in reading comprehension



**Figure 2:** Final thematic map of difficulties encountered by students in reading comprehension

Figures 1 and 2 illustrate the 18 codes gathered from the qualitative respondents. These codes are categorized into four groups. Five (5) codes appeared from text structure, another five (5) for vocabulary knowledge, another four (4) under concentration, and another four (4) for proficiency. In line with the approach of Pawlik et al. (2024), the researcher used this model to illustrate themes, subthemes, codes, and their interconnections. On the other hand, Figure 2 illustrates the four (4) categories related to the main theme, the rectangular shape in the middle of the map. The researcher developed the four (4) sub-themes based on the codes gathered from the respondents. The study found that learners commonly struggled with text structure, limited vocabulary, connecting ideas, and maintaining focus, which affected comprehension and reading proficiency, particularly with complex or digital texts (Harita, 2025; Rahayu, 2024). Based on the findings, the researcher emphasizes four major aspects influencing students’ reading comprehension: Text Structure (How text is organized), Concentration (Ability to concentrate), Proficiency (Reading Skills), and Vocabulary Knowledge (Understanding words and terms). The researcher stated that if students are unable to understand reading content, they have a problem with text structure (Sayekti et al., 2024).

On the other hand, Peveryly et al. (2021) stated that environmental distractions and thinking about other tasks while performing them are major factors that can reduce students’ concentration. In line with Kuhn’s (2020) study, Proficiency includes accuracy, communication skills, and the ability to process information. Most respondents reported weak information retention and poor reading fluency. Finally, the problem with vocabulary is the learners’ struggle to grasp meaning (Spencer et al., 2018). The current study found that most students are unfamiliar with various terms. In addition, the researcher used a framework of Pawlik et al. (2024) to gather and analyze data from the respondents. Based on the results, a total of 18 codes were identified in the initial thematic map, and in the final thematic map, these codes were categorized into four groups: Text Structure, Concentration, Proficiency, and Vocabulary Knowledge.

**Table 2**  
*Frequency and Percentage of Difficulties Encountered by Students in Reading Comprehension*

CATEGORIES	FREQUENCY	PERCENTAGE
Text Structure	8	66%
Concentration	8	66%
CATEGORIES		
Vocabulary Knowledge	9	75%
Proficiency	6	50%

The data in Table 2 show the common challenges faced by the 12 respondents in reading comprehension.

Based on statistical results, the highest reported difficulty is Vocabulary Knowledge, with 9 out of 12 respondents (75%) indicating that unfamiliar or limited vocabulary hinders their understanding of texts. Both Text Structure and Concentration are reported as challenges by 8 out of 12 respondents (66% each). This indicates that a substantial portion of students struggle to identify and follow a text's organization and to maintain focus while reading. The least-reported challenge is Proficiency, with 6 of 12 respondents (50%) identifying it as a difficulty. While this is lower than the other categories, it still represents half of the sample, indicating that a lack of overall reading skills continues to affect many learners' comprehension.

**Table 3**

*Mean Extent of Difficulties Encountered in Reading Comprehension in Terms of Text Structure and Concentration*

Text Structure	Weighted Mean*	Interpretation
1. I cannot easily identify the main concept in texts with complex structures.	2.96	Moderate Extent
2. I am not comfortable reading text with complex structures.	2.80	Moderate Extent
3. I am focusing too much on small details instead of the main idea.	2.74	Moderate Extent
4. I am not familiar with different genres or different styles of text.	2.87	Moderate Extent
5. I am not easily able to recognize signal words that indicate text structure, such as "however," "therefore," and "finally."	2.87	Moderate Extent
6. I find it hard to figure out the flow of ideas when the text uses cause-and-effect structures.	2.79	Moderate Extent
Composite Mean	2.84	Moderate Extent
<b>Indicators (Concentration)</b>		
1. I am easily distracted from studying.	2.49	Low Extent
2. I am not motivated to learn.	3.12	Moderate Extent
3. I cannot easily process information from what I have read.	2.83	Moderate Extent
4. I do not use effective reading strategies, like visualizing, that help me understand different information.	2.80	Moderate Extent
5. I am thinking about other tasks while reading.	2.53	Low Extent
6. I find it difficult to follow the flow of the passage.	2.66	Moderate Extent
Composite Mean	2.74	Moderate Extent

**Scale:** 4.20-5.00 Very High; 3.40 -4.19 High; 2.60-3.39 Moderate; 1.80-2.59 Low; 1.00-1.79 Very Low

Table 3 shows the mean extent of difficulties encountered in reading comprehension related to text structure and concentration, with composite means of 2.84 and 2.74, respectively, interpreted as moderate. The data show that students experience moderate difficulties in text structure, with weighted means ranging from 2.96 to 2.74 and a composite mean of 2.84. All items fall under the Moderate Extent category. Among the six (6) areas, identifying the main concept is the most difficult (WM = 2.96). The findings suggest that although students can read accurately, many still struggle to determine the central idea, especially in complex texts. This aligns with Williams & Martinez (2019), who emphasized that awareness of text structure aids in identifying main ideas, and with Meyer & Ray (2011, as cited in Bogaerds et al., 2021), who noted that knowledge of text structure improves comprehension of complex information. Meanwhile, focusing on small details is the least difficult (WM = 2.74), though it still indicates that students tend to overlook minor but meaningful information. Overall, students have difficulty both understanding specific concepts and linking them to main ideas. Research suggests the significance of explicit instruction in text structures, including teaching signal words, using graphic organizers, and practicing main-idea identification (Sayekti et al., 2024; Meyer & Ray, 2011), as cited in Bogaerds et al. (2021). In summary, students show some awareness of text structures but still need support in comprehending and organizing complex text.

Moreover, the findings indicate that students experience moderate difficulty maintaining concentration while reading, with a composite mean of 2.74. Although they can generally focus, many struggle to sustain

attention and apply effective reading strategies. The lowest-rated items are “I am easily distracted from studying” (WM = 2.49) and “I am thinking about other tasks while reading” (WM = 2.53)—showing that distractions and multitasking weaken comprehension. Meanwhile, moderate ratings for processing information (WM = 2.83) and using reading strategies (WM = 2.80) suggest that students may lack skills to support focused, efficient reading. Overall, these results show that concentration issues moderately affect students’ reading comprehension, highlighting the need to strengthen motivation, attention control, and reading. These findings align with Peverly et al. (2021), Arrington et al. (2023), and Sayekti et al. (2024) note that environmental distractions, multitasking, and limited concentration abilities hinder comprehension. Creating engaging, distraction-free environments and promoting effective learning strategies may help improve students’ focus and understanding.

**Table 4**

*Mean Extent of Difficulties Encountered in Reading Comprehension in Terms of Proficiency and Vocabulary Knowledge*

Indicators (Proficiency)	Weighted Mean*	Interpretation
1. I have poor reading fluency.	3.07	Moderate Extent
2. I have insufficient knowledge of English.	2.67	Moderate Extent
3. I cannot easily understand longer sentences.	2.76	Moderate Extent
4. I have trouble with more complicated sentences.	2.61	Moderate Extent
5. I struggle to answer comprehension questions after reading a text.	2.58	Low Extent
6. I find it hard to make an inference from what I have read.	2.53	Low Extent
Composite Mean	2.74	Moderate Extent
Indicators (Vocabulary Knowledge)		
1. I have a limited vocabulary.	2.69	Moderate Extent
2. Due to a lack of prior knowledge, I find it hard to make a connection between new information and what I already know.	2.42	Low Extent
3. I struggle with complex concepts.	2.53	Low Extent
4. I find it difficult to understand what I am reading because of unfamiliar vocabulary.	2.78	Moderate Extent
5. I lose my interest in reading when I encounter too many unfamiliar terms.	2.79	Moderate Extent
6. I get confused when a word has more than one meaning.	2.66	Moderate Extent
Composite Mean	2.65	Moderate Extent

Scale: 4.20-5.00 Very High; 3.40-4.19 High; 2.60-3.39 Moderate; 1.80-2.59 Low; 1.00-1.79 Very Low

Table 4 presents the mean extent of difficulties encountered in reading comprehension in terms of proficiency and vocabulary knowledge, with composite means of 2.74 and 2.65, respectively, interpreted as moderate. Moreover, the data above demonstrates that students have a moderate level of difficulty in reading proficiency (Composite Mean = 2.70). Although they possess basic reading skills, many struggle with fluency and understanding complex phrases. Reading fluency, the highest-rated difficulty (WM = 3.07), suggests that slow or hesitant reading affects comprehension. Moderate ratings for understanding long or complicated sentences (WM = 2.76 and 2.61) show that sentence complexity disrupts smooth reading. Lower means for answering comprehension questions (WM = 2.58) and making inferences (WM = 2.53) indicate challenges in applying critical thinking and interpreting deeper meanings. Overall, limited fluency and difficulty processing complex sentences moderately affect students’ comprehension, highlighting the need for continued practice and targeted instruction. These results align with Kuhn (2020) and Rasinski et al. (2023), who emphasize the importance of fluency, accuracy, and decoding in improving comprehension. Students’ struggles with vocabulary, fluency, and understanding complex text suggest that their reading abilities are still developing. Current research supports the use of guided and repeated oral reading to strengthen fluency, improve information processing, and enhance overall comprehension.

Furthermore, the findings show that students experience a moderate level of difficulty in vocabulary knowledge (Composite Mean = 2.65). Although they can understand simple phrases, they still struggle with unfamiliar and complex words, which limits comprehension. The highest difficulties, *losing interest when encountering many unknown terms* (WM = 2.79) and *understanding texts with unfamiliar vocabulary* (WM = 2.78), suggest that limited word knowledge reduces motivation and hinders understanding. Moderate ratings for word confusion and limited vocabulary (WM = 2.66 and 2.69) further indicate difficulty interpreting meanings and connecting prior knowledge to new information. Overall, insufficient breadth and depth of vocabulary moderately affect students' reading comprehension, highlighting the importance of explicit vocabulary instruction and exposure to varied reading materials. These results align with Pan et al. (2023) and Crosson et al. (2023), who found that limited vocabulary impairs learners' ability to interpret meanings and form connections. Similar to the present findings, their studies emphasize that unfamiliar words can discourage students, underscoring the value of context-based learning and targeted vocabulary instruction to support comprehension.

The overall results, which show a moderate level of difficulty (M = 2.73), are consistent with previous research. Challenges in understanding text structure align with the findings of Sayekti et al. (2024) and Meyer and Ray (2011, as cited in Bogaerds et al., 2020), who note that complex structures can hinder comprehension. Difficulties related to concentration correspond with findings by Peverly et al. (2021), Arrington et al. (2023), and Sayekti et al. (2024), who emphasize the negative effects of distractions and reduced focus. Similarly, proficiency-related challenges align with the work of Kuhn (2020) and Rasinski et al. (2023), who highlight the importance of fluency for comprehension. Finally, the moderate difficulties in vocabulary knowledge are consistent with Pan et al. (2023) and Crosson et al. (2023), who found that limited vocabulary impairs meaning-making and comprehension. In summary, both the present study and previous research demonstrate that reading comprehension is influenced by text structure awareness, concentration, reading fluency, and vocabulary knowledge.

**Table 5**

*Frequency and Percent Distribution of Students' Reading Comprehension Level Based on Phil-IRI Result*

Reading Comprehension Level	Frequency	Percent
Frustration	27	19.7
Instructional	68	49.6
Independent	42	30.7
Total	137	100.0

Table 4 shows that the majority of respondents (49.6%) are at the instructional level of reading comprehension, suggesting they may understand texts with an instructor's assistance. Then, about 30.7% are independent, meaning they can read and comprehend on their own, while 19.7% are at the frustration level, indicating major difficulty understanding texts. The findings indicate that approximately fifty percent (50%) of students require moderate support to comprehend reading materials completely. The result in this study supports the findings of Feng & Chen (2016), as cited in Saquido & Velasco (2024), which show that the majority of the students are at the instructional level (49.6%) of reading comprehension. The findings indicate that many students still need assistance in comprehending and elaborating on what they read, reflecting difficulties with word comprehension and conclusion. This is in line with the Phil-IRI's objective of enhancing literacy through effective reading instruction and evaluation. Strong reading habits, suitable language instruction, and teacher preparation were also highlighted by Sartika et al. (2020) and Tomas et al. (2021). The results indicate that to develop students' comprehension skills further and help them become independent readers, innovative teaching methods and ongoing teacher training and seminars are necessary.

**Table 6***Frequency and Percent Distribution of Students' Academic Performance*

Final Grade in Science	Frequency	Percent
75 - 79	45	32.8
80 - 84	58	42.3
85 - 89	32	23.4
90 - 94	2	1.5
Total	137	100.0

Scale: 90-94 Outstanding; 85-89 Very Satisfactory; 80-84 Satisfactory; 75-79 Fairly Satisfactory.

The table above demonstrates the frequency and percentage distribution of students' academic performance in science. Results show that the largest proportion of students, 58 out of 137 (42.3%), obtained grades in the 80–84 range, corresponding to the Satisfactory level under the DepEd grading scale. Meanwhile, 45 students (32.8%) scored 75–79, which is categorized as Fairly Satisfactory. A smaller group of 32 students (23.4%) achieved grades between 85–89 (Very Satisfactory), and only 2 students (1.5%) earned grades in the 90–94 range, classified as Outstanding. Overall, the findings suggest that most students demonstrate average to satisfactory performance in science, with only a limited number reaching higher achievement levels. This indicates that while learners generally meet minimum competency standards, there remains a need for targeted support, enrichment activities, or instructional interventions to help more students progress toward Very Satisfactory and Outstanding levels of performance.

The findings above indicate that many students perform in science at an average to satisfactory level. In line with the studies of Fatiloro et al. (2017), as cited in Wani & Ismail (2024), the authors suggested that frequent reading habits contribute to increased students' academic achievement. These findings indicate that while good reading habits enhance comprehension across disciplines, students' poor performance may be related to their difficulties with reading comprehension. Additionally, Bibi et al. (2020) note that good study and reading habits positively impact learning outcomes. Therefore, encouraging daily reading motivation and engagement through teachers and parents can enhance reading comprehension and academic achievement, especially in core subjects like science.

**Table 7***Path Coefficients and p-values for Hypothesis Testing 1*

Paths	Beta ( $\beta$ ) Coefficients	p-values*	Interpretation
Ho1: Difficulties Encountered→Reading Comprehension Level			
Text→PHILIRI	0.063	0.229	Not Significant
Con→PHILIRI	0.060	0.240	Not Significant
Prof→PHILIRI	0.071	0.198	Not Significant
Vocab→PHILIRI	-0.158	0.028	Significant

\*Significant at  $p < 0.05$

The data above demonstrate that most of the identified challenges, particularly those concerning text structure ( $\beta = 0.063$ ,  $p = 0.229$ ), concentration ( $\beta = 0.060$ ,  $p = 0.240$ ), and proficiency ( $\beta = 0.071$ ,  $p = 0.198$ ), have no significant impact on students' reading comprehension levels as measured by the Phil-IRI assessment. This indicates that these aspects may not strongly affect students' overall comprehension performance. Difficulties in Reading comprehension and vocabulary are significantly correlated negatively ( $\beta = -0.158$ ,  $p = 0.028$ ). This indicates that students' reading comprehension tends to decline when they encounter unfamiliar, difficult terminology. The findings also emphasize that vocabulary is essential for achieving reading comprehension, as students with limited vocabulary may find it difficult to understand meanings and concepts and to make connections between ideas within a text.

On the other hand, the researcher's null hypothesis states that there is no significant relationship between the difficulties encountered in reading comprehension and the level of reading Comprehension based on Phil-IRI result. Based on the findings, among the four (4) aspects, text structure, concentration, and proficiency have p-values greater than 0.05, indicating that these difficulties do not significantly affect students' PHIL-IRI reading comprehension level; therefore, the null hypothesis is accepted for these three aspects. Vocabulary knowledge shows a p-value lower than 0.05, indicating that this difficulty has a significant effect on students' PHIL-IRI reading comprehension level. Indicates that the null hypothesis in this aspect is rejected. In summary, while text structure, focus, and proficiency issues have less impact, vocabulary knowledge has been demonstrated to play an essential role in reading comprehension, suggesting the value of interventions that enhance students' word knowledge and language skills. The findings in this study align with those of Fatiloro et al. (2017), as cited in Wani & Ismail (2024), demonstrating that continuous reading habits improve academic performance by increasing vocabulary over time.

**Table 8**

*Path Coefficients and p-values for Hypothesis Testing 2*

Paths	Beta ( $\beta$ ) Coefficients	p-values*	Interpretation
Ho2: Difficulties Encountered→Academic Performance			
Text structure→Sci_FG	0.215	0.005	Significant
Concentration→Sci_FG	-0.165	0.023	Significant
Proficiency→Sci_FG	0.025	0.384	Not Significant
Vocabulary knowledge→Sci_FG	-0.007	0.466	Not Significant

\*Significant at  $p < 0.05$

In the second hypothesis, the researcher's null hypothesis states that there is no significant relationship between difficulties in Reading Comprehension and students' academic performance in science. The data above demonstrate that students' academic performance in science is significantly correlated with challenges with text structure ( $\beta = 0.215$ ,  $p = 0.005$ ) and concentration issues ( $\beta = -0.165$ ,  $p = 0.023$ ), indicating that the null hypotheses for text structure and concentration are rejected. The findings imply that students' science performance or grades suffer when they have difficulty maintaining concentration while reading and comprehending complex texts. Meanwhile, vocabulary knowledge ( $\beta = -0.007$ ,  $p = 0.466$ ) and reading proficiency ( $\beta = 0.025$ ,  $p = 0.384$ ) were not significantly correlated with science academic performance, indicating that the null hypothesis for these aspects is accepted.

This is in line with the study by Adora et al. (2024), which found that students' reading comprehension abilities were substantially related to academic performance, indicating that poor comprehension is associated with lower academic outcomes. Furthermore, research indicates that understanding text structures helps learners organize and comprehend textual information, thereby improving comprehension and memory of academic content. Based on the data above, the findings indicate that text comprehension and concentration skills are both essential to achieving good performance in science. The study's findings also highlight the value of developing focus and reading strategies to improve students' academic performance.

**Table 9**

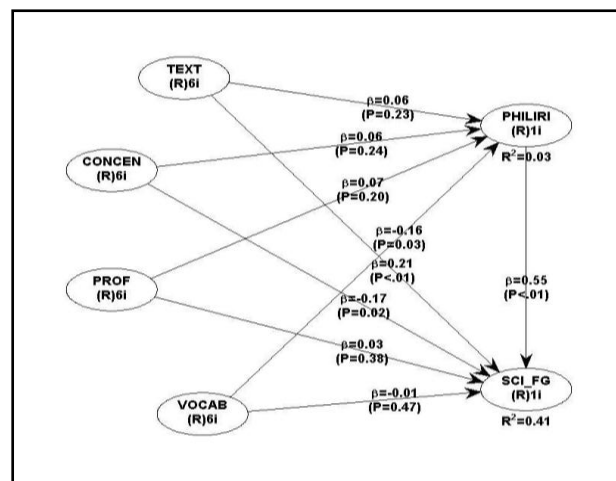
*Path Coefficients and p-values for Hypothesis 3*

Paths	Beta ( $\beta$ ) Coefficients	p-values*	Interpretation
Ho3: Reading Comprehension Level→Academic Performance			
PHILIRI→Sci_FG	0.552	<0.001	Highly Significant

\*Significant at  $p < 0.05$

In the third hypothesis, the researcher's null hypothesis states that there is no significant relationship

between Reading Comprehension, as measured by the Phil-IRI results, and students' academic performance in science. Based on the findings above, the Phil-IRI shows a  $p$ -value  $< 0.05$ , indicating that it significantly affects the academic performance of science students. Therefore, the researcher's null hypothesis was rejected. The relationship is highly significant, indicating that students who perform well in reading comprehension are likely to perform well in science. The findings of the study suggest that reading comprehension skills are essential for understanding scientific concepts, solving problems, and evaluating data, in addition to comprehending written texts. Since students must understand vocabulary, follow complex instructions, and make sense of learning texts, science instruction can rely on reading comprehension. The current study supports the findings of a recent study, which reports that reading proficiency is significantly correlated with science academic performance among junior high school students, indicating that weak reading skills are associated with lower academic performance (Abao, 2025). This study is also aligned with the work of Bibi et al. (2020), who emphasized a strong positive correlation between academic success and study habits such as active reading. In Summary, the findings show that strengthening students' reading comprehension skills can directly improve their academic achievement, particularly in core subjects like science, where comprehending text and context is necessary.



**Figure 3.** Structural model of difficulties encountered by students in reading comprehension in relation to Phil-IRI result and Academic performance of students

Displayed in the structural model are four (4) latent variables on the left side, representing difficulties encountered in reading comprehension: text structure (TEXT), concentration (CONCEN), proficiency (PROF), and vocabulary knowledge (VOCAB). These variables are exogenous, each with six indicators, and are hypothesized to directly relate to the endogenous variable, academic performance, as measured by the science final grade. A mediating or intervening variable, the level of reading comprehension represented by Phil-IRI result, is also linked between the variables, challenges encountered, and academic performance. The Phil-IRI result, acting as an intervening variable, explains the relationship between the exogenous variables and the endogenous variable, academic performance, represented by the final grade in science. Beta coefficients,  $p$ -values, and coefficient of determination ( $R^2$ ) are recorded with two decimal places for the direct connections between variables. Beta coefficients signify the strength of the direct relationship between the variables. Fig. 3 presents the results of the structural equation modelling, which used the partial least squares method and was performed with WarpPLS version 7.0. The basis for the rejection of the null hypothesis is anchored on the 0.05 significance level.

**Table 10**

*Path Coefficients and p-values for Hypothesis Testing*

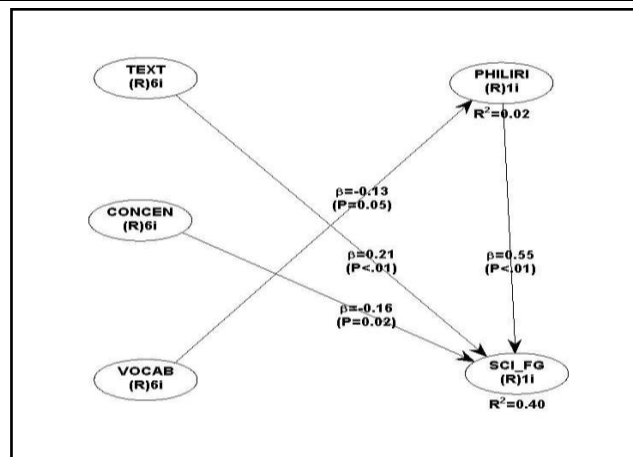
Paths	Beta ( $\beta$ ) Coefficients	p-values*	Interpretation
<b>Ho<sub>1</sub>: Difficulties Encountered→Reading Comprehension Level</b>			
Text→PHILIRI	0.063	0.229	Not Significant
Concen→PHILIRI	0.060	0.240	Not Significant
Prof→PHILIRI	0.071	0.198	Not Significant
Vocab→PHILIRI	-0.158	0.028	Significant
<b>Ho<sub>2</sub>: Difficulties Encountered→Academic Performance</b>			
Text→Sci_FG	0.215	0.005	Significant
Concen→Sci_FG	-0.165	0.023	Significant
Prof→Sci_FG	0.025	0.384	Not Significant
Vocab→Sci_FG	-0.007	0.466	Not Significant
<b>Ho<sub>3</sub>: Reading Comprehension Level→Academic Performance</b>			
PHILIRI→Sci_FG	0.552	<0.001	Highly Significant

\*Significant at  $p < 0.05$

The findings in the table above show that only vocabulary knowledge is significantly related to reading comprehension ( $\beta = -0.158$ ,  $p = 0.028$ ). This suggests that students with limited vocabulary struggle more to understand texts. In contrast, text structure, concentration, and proficiency showed no significant correlation with reading comprehension, with negligible coefficients ( $\beta = 0.063, 0.060, 0.071$ ) and p-values above 0.05. In the first hypothesis, the null hypothesis is rejected for vocabulary knowledge but accepted for the other three variables. These findings align with Guerra and Kronmüller (2024), who reported that students with richer vocabularies read more efficiently and integrate meaning more effectively. This highlights the importance of strengthening students' vocabulary through contextual learning and targeted vocabulary instruction to enhance reading comprehension.

For the second hypothesis, the structural model identified four paths leading to students' Science performance. The results show that text structure ( $\beta = 0.215$ ,  $p = 0.005$ ) and concentration ( $\beta = -0.165$ ,  $p = 0.023$ ) are the only factors that significantly predict Science grades. Although their beta values are modest, they still indicate that students who understand how texts are organized and who can stay focused while reading tend to perform better academically. In contrast, proficiency ( $\beta = 0.025$ ,  $p = 0.384$ ) and vocabulary knowledge ( $\beta = -0.007$ ,  $p = 0.466$ ) showed no significant effects, suggesting that these difficulties have little direct impact on science outcomes. The findings highlight the importance of helping students strengthen their focus and deepen their understanding of scientific text structures, as these skills appear to support their learning and performance in science meaningfully.

For the third hypothesis, the results show a strong and highly significant relationship between students' reading comprehension (Phil-IRI) and their science performance ( $\beta = 0.552$ ,  $p < 0.001$ ). This indicates that the null hypothesis is rejected. It indicates that students with stronger reading comprehension skills are much more likely to achieve higher grades in science. Their ability to understand, analyze, and interpret text helps them grasp scientific concepts, follow instructions, and make sense of complex ideas. These results support the findings of Bibi et al. (2020), who also reported a positive connection between reading ability and academic performance. Overall, the study highlights that improving reading comprehension is not just a language goal; it also directly supports better learning in science.



**Figure 4.** Emerging model of difficulties encountered by students in reading comprehension in relation to Phil-IRI result and Academic performance of students

A new model emerges after some variables were found to be insignificant in their connection to reading comprehension level and academic performance. The structural equation analysis reveals the emerging model in Fig. 4. Among the three indicators left under difficulties encountered, only one construct, vocabulary knowledge, emerged as connecting to the intervening variable, Phil-Iri result, which, in turn, directly links to the science final grade. Text structure and concentration appear to connect to the science final grade. Again, beta coefficients ( $\beta$ ) and significance levels (p-value) are indicated in two decimal places. The combined contribution of text structure, concentration, and Phil-Iri results accounted for a moderate 40% ( $R^2 = 0.40$ ) of the science final grade. Meanwhile, vocabulary knowledge contributed only 2% ( $R^2 = 0.02$ ) to the science final grade. The standardized estimates of all the paths in the new model are further explained in the succeeding discussion. Aligned with the current study, a recent study states that students who struggled with word meanings and comprehension also showed lower academic performance, suggesting that vocabulary knowledge is closely linked to learning outcomes (Guerra & Kronmüller, 2024).

**Table 11**

*Standardized Estimates of the Path in the Emerging Model*

Hypotheses	Standardized Estimates ( $\beta$ )	standard Error	p-value	Effect Coefficient	Effect Size
Ho <sub>1</sub> : Difficulties Encountered→Reading Comprehension Level					
Vocab→PHILIRI	-0.134	0.083	0.050	0.018	Small
Ho <sub>2</sub> : Difficulties Encountered→Academic Performance					
Text→Sci_FG	0.208	0.081	0.006	0.053	Small
Concen→Sci_FG	-0.164	0.082	0.024	0.037	Small
Ho <sub>3</sub> : Reading Comprehension Level→Academic Performance					
PHILIRI→Sci_FG	0.552	0.075	<0.001	0.312	Large

\*Significant at  $p < 0.05$

The standardized path estimates in the emerging model are -0.134, 0.208, -0.164, and 0.552, which were deemed significant at the 0.050, 0.006, 0.024, and <0.001 levels, respectively. As explained earlier in the third hypothesis result, while reading comprehension level shows a moderate relationship with academic performance, as measured by the science final grade, the effect size of 0.312 indicates a direct, large effect of the Phil-IRI result on the science grade. Meanwhile, students’ difficulties with concentration have a negative, low effect on their final science grade. This inverse relationship suggests that the more difficulty students encounter with reading concentration, the lower their science grade. Conversely, fewer concentration problems while reading

lead to a better understanding of the material, which eventually helps students earn better grades. Difficulties in the text structure of a reading material recorded an effect coefficient of 0.053, indicating a positive, small effect on the final grade in science. Difficulties with vocabulary knowledge also affected reading comprehension. It showed a negative coefficient ( $\beta = -0.134$ ) and a small effect size of 0.018. This implies that difficulties with vocabulary knowledge have an inverse effect on Phil-IRI results. The more students encounter vocabulary difficulties, the lower their scores can be on the reading comprehension test. The minimal values of the standard error of the estimated path coefficients, which ranged from 0.075 to 0.083, are considered low, indicating that the structural equation modeling predictions are likely to be close to the actual values.

In summary, the data in the table and the structural model above indicate that reading comprehension has the primary and most direct effect on students' academic performance in science ( $\beta = 0.552, p < 0.001$ ). At the same time, Text structure ( $\beta = 0.208, p = 0.006$ ) and focused attention ( $\beta = -0.164, p = 0.024$ ) have lower but still significant effects. On the other hand, Vocabulary knowledge ( $\beta = -0.134, p = 0.050$ ) has a minor and indirect effect on comprehension. These findings imply that students' ability to understand text structure, maintain focus, and read with comprehension directly impacts their performance in science. The results of the current study support the findings of Adora et al. (2024), who found that students' reading comprehension abilities were substantially associated with academic performance, implying that poor understanding leads to poor academic outcomes. The findings also suggest that improving students' reading comprehension and concentration can help them perform better in science.

The researcher prepared a proposed program, READ-UP (Reading Enhancement and Academic Development Uplifting Program), comprising two strategies: Peer Tutoring and Motivational. It is in line with the program proposed by Rogando & Lugay (2019), a Reading Enhancement and Development (REaD) Program, which aims to uplift academic performance through guided reading activities, aligning with Vygotsky's social constructivist view that learning is enhanced through structured social interaction and collaborative engagement.

**Table 12**

*Proposed Program to Enhance Reading Skills and Develop Students' Academic Performance*

Strategy 1: Peer-Tutoring						
Subtitle: Read to Lead, Lead to Read						
Objectives	Activities/ Strategies	Persons Involved	Time Frame	Resources	Fund Source	Success Indicator
Implement the program and orient the reading leaders and tutees.	Selection and Orientation of Reading Leaders; Grouping of Reading Buddies; Setting Reading Milestones	Reading Coordinator, Subject Teachers, Class Advisers, PTA Officers, Parents, BLGU, Students	Week 1 of each quarter	Orientation guide, student list, grouping chart, progress charts	MOOE, Private Sectors, Sponsors, BLGU, SEF	Orientation is conducted once per quarter
Develop communication, leadership, and tutoring skills	Peer Tutoring Sessions; Mentoring of Reading Leaders	Subject Teachers, Class Advisers, Reading Leaders & Tutees	Weekly (2-3 times/week)	Reading materials, worksheets	MOOE, Private Sectors, Sponsors, BLGU, SEF	Sessions are conducted 2-3 times/week

Improve students' reading comprehension	Peer Tutoring Sessions; Progress Monitoring; Checking reading logs and comprehension tests	Subject Teachers, Class Advisers, Reading Leaders & Tutees	Weekly (monitoring every Friday)	Reading logs, worksheets, and evaluation forms	MOOE, Private Sectors, Sponsors, BLGU, SEF	Progress monitoring is conducted weekly
Strategy 2: Motivational Strategy Subtitle: Recognition & Reward System						
Promote engagement and positive reading habits.	Weekly Readers of the Week; Monthly Reader Awards; Reading Wall of Fame	Reading Coordinator, Tutors, Tutees, School Admin	Weekly (Friday), Monthly (end of month)	Certificates, medals, tokens, and a bulletin board	MOOE, Private Sectors, Sponsors, BLGU, SEF	Recognition is conducted weekly/monthly.
Objectives	Activities/Strategies	Persons Involved	Time Frame	Resources	Fund Source	Success Indicator
Recognize quarterly accomplishments.	Quarterly Recognition Program (Top Readers, Most Improved)	Reading Coordinator, Subject Teachers, Tutors & Tutees, Principal	End of each quarter	Certificates, medals, tokens	MOOE, Private Sectors, Sponsors, BLGU, SEF	Recognition is conducted every quarter
Sustain motivation and consistent reading	Incentive system; Public acknowledgment of progress	Reading Coordinator, Tutors, School Admin	Weekly, Monthly, Quarterly	Certificates, printed rewards, tokens	MOOE, Private Sectors, Sponsors, BLGU, SEF	Active participation and improved reading skills

By Incorporating the READ-UP Program, students are expected to: Enhance reading comprehension and vocabulary; Develop and strengthen leadership, confidence, responsibility, and collaboration skills among Reading Leaders and Reading buddies/tutees; Promote strong relationships with others and teamwork through collaborative reading; Boost engagement in reading-related activities inside and outside of the classroom; and Establish an inspiring and supportive school reading culture. The program encourages student-to-student learning, with "Reading Leaders" (proficient readers) assisting "Reading Buddies" (students who require reading assistance). The program not only enhances reading comprehension and vocabulary but also develops leadership, cooperation, and compassion among students. In line with Vygotsky's Social Constructivism Theory, the current study emphasizes the development of knowledge through social interaction, teamwork, and cultural influence. Research demonstrates that social interaction-based classroom methods can improve student collaboration and participation, indicating that peer-assisted learning improves students' understanding, vocabulary, teamwork, confidence, compassion, and even mutual respect (Dewi et al., 2025). The Recognition and Reward System aligns with the study by Zhang et al. (2024), which found that providing autonomy-supportive feedback that meets students' psychological needs, including competence, significantly boosts their intrinsic motivation and participation in educational activities. This effect reflects Self-Determination Theory's view that positive acknowledgment and supportive feedback can promote a sense of competence and motivate students internally.

Meanwhile, the researchers' frameworks were derived from the Department of Education's action plan

matrix format. It is under the DepEd Order No. 44, s. 2015: Guidelines on the Enhanced School Improvement Planning (SIP) Process and the School Report Card (SRC) and DepEd Planning Service & Basic Education Sector Transformation (BEST) Program (2015): School Improvement Plan (SIP) and Annual Implementation Plan (AIP) Manual. In essence, READ UP aims to provide a friendly, inspiring, and collaborative reading environment in which students may develop not only academically but also socially and emotionally.

#### 4. Conclusions

After analyzing the findings, the following conclusions were obtained: The four common challenges encountered by students are text structure, concentration, proficiency, and vocabulary knowledge. The four challenges in reading comprehension have a moderate extent of difficulty, and among the four aspects, text structure has the highest composite mean. Indicating that the need for targeted assistance is in this area. The findings also demonstrate that students struggle moderately with text structure-related reading comprehension. Therefore, students have difficulty understanding how texts are organized, which affects their overall reading comprehension. Based on the findings, the data show that students have a moderate level of difficulty concentrating while reading when thinking about another task. It indicates that students have difficulties in maintaining focus while reading, especially when their attention is divided by other tasks. Additionally, the findings show that the students have a moderate level of difficulty in reading proficiency. As a result, the student's reading skills are satisfactory but still need further development to improve comprehension and fluency. The results also demonstrate that students have a moderate level of difficulty with vocabulary knowledge. It indicates that insufficient vocabulary knowledge moderately affects students' capacity to comprehend reading information. The majority of respondents are at the instructional level of reading comprehension, meaning they can understand texts with some help. It is almost 50%, followed by the independent level, which means they can read on their own, while the lowest percentage is at the frustration level. The findings indicate that most respondents need assistance with reading.

Most students performed at an average level in science, with many meeting fundamental knowledge requirements and only a few excelling. This result indicates that limited vocabulary knowledge moderately hinders students' ability to understand reading materials. Therefore, additional support and instructional strategies for students are still needed to achieve higher performance. Vocabulary knowledge showed a significant relationship with reading comprehension, whereas text structure, study focus, and proficiency were not significantly related to reading comprehension. This indicates that students need to familiarize themselves with a broader range of vocabulary, especially in unfamiliar texts, to enhance their vocabulary knowledge. Among the four (4) difficulties identified in the study, text structure and concentration were significantly related to academic performance. At the same time, vocabulary and proficiency are not significantly related to academic performance. The findings indicate that students who understand the main concept of context and focus on the task are more likely to achieve academic success. Meanwhile, there is a significant relationship between reading comprehension and academic performance in science. This correlation indicates that students who performed well in reading comprehension were more likely to excel in science. On the other hand, to strengthen students' reading comprehension and achieve satisfactory academic performance, the researcher developed and recommended the incorporation of the READ-UP program, which includes two strategies.

**Recommendations** - Based on the findings and conclusions presented, the following recommendations are provided: To identify and track students' needs, the teacher may conduct diagnostic reading assessments at the start of each quarter. To promote understanding, teachers may adopt specific reading strategies such as identifying main concepts, mapping text structures, and using context clues. To lessen the impact of students' difficulties with reading comprehension, teachers may also provide the following targeted interventions, which can be integrated into regular sessions or classes. Teachers may strengthen instruction in text structure to improve students' comprehension skills and their grasp of complex reading content. The teacher may help students learn to organize their tasks to avoid multitasking and focus on one task at a time. Practicing consistent oral reading may help students to digest information more effectively. The teacher may also help students boost

their vocabulary using the “Word of the Day” strategy before the lesson starts.

To make reading more engaging and less challenging, teachers may incorporate interactive activities such as peer discussions and group reading. To enhance students' understanding of scientific texts and terminology, teachers may integrate reading comprehension strategies into lessons. Using the PowerPoint presentation during the lesson, the teacher may check the vocabulary and proficiency of students using the I READ, WE READ, and YOU READ strategy. Teachers may integrate the vocabulary check strategy into their lessons to assess whether students are familiar with the terminology they may encounter. Students may engage in different reading activities to practice and enhance their reading skills. School administrators may provide training and seminars to enhance teachers' skills in properly instructing and guiding students, especially in reading. Teachers may also incorporate the 1st strategy proposed by the researcher, the “Read to Lead, Lead to Read” program, a peer-assisted learning or peer tutoring program in which students can engage in reading activities during their free time. To encourage and engage students in reading activities, the teacher may also incorporate the suggested 2nd strategy. Future researchers may use this study to explore the positive impact of targeted reading interventions on students' Reading skills, with a particular focus on vocabulary development and comprehension strategies. Future studies may also investigate how enhancing students' vocabulary and reading skills can improve their comprehension of science texts.

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