



## Strategies, Attitude, and Multimodal Text Comprehension of Junior High School Students

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### ABSTRACT

This study assessed the reading attitudes, reading strategies, and multimodal text comprehension of Junior High School (JHS) students at Negros Occidental National Science High School (NONSHS) with a sample size (n=199) using a descriptive-correlational design to develop a Reading Intervention Program. Statistical analysis employed Mann-Whitney U, Kruskal-Wallis, and Spearman rho. Data gathered through a researcher-made questionnaire, the MARSII, and a comprehension test revealed that students exhibited moderate reading attitudes and moderate multimodal text comprehension, despite having a generally high use of reading strategies. Specifically, problem-solving and support strategies were frequently used, while global strategies were moderate. Higher year levels demonstrated better comprehension, and while sex did not significantly affect attitudes or strategies, year level significantly influenced support strategy use and comprehension. Statistical analysis showed a significant but negligible positive relationship between reading attitudes and strategies, but notably, a negative correlation was found between passive reading attitudes and multimodal comprehension. The study concludes that enhancing students' active engagement and strategic reading behaviors is essential for improving multimodal literacy, particularly in contexts like distance learning. A Reading Intervention Program was designed based on these findings to strengthen reading attitudes, strategy use, and comprehension among the junior high school students.

**Keywords:** Attitudes, Multimodal Comprehension, Reading Intervention Program, Strategies

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## INTRODUCTION

Integration of multimodal materials, such as videos, infographics, and interactive media, enhances students' engagement and comprehension (Cao & Chan, 2020; Sun & Lan, 2021). Similarly, Wang and Zhang (2025) found that explicit instruction utilizing reading strategies significantly improved comprehension of multimodal materials. These international studies underscore that both strategic reading and a positive reading disposition contribute to students' ability to interpret multimodal text presentation.

At the national level, local scholars such as Bernardo (2019) and Ocampo (2021) have observed that reading attitude, and strategy use strongly influence comprehension outcomes among Filipino students. Andres and Peralta (2020) further noted that students who exhibit active reading behaviors tend to achieve better comprehension scores than those with passive attitudes.

Negros Occidental National Science High School (NONSHS) in Victorias City reflects similar trends and challenges. The transition to blended learning has shifted their exposure from traditional print to multimodal texts. Preliminary classroom observations indicate that while students demonstrate interest in digital and visual materials, the extent to which students employ effective reading strategies or sustain positive reading attitudes toward these materials remains uncertain.

Despite the growing integration of multimodal materials, there remains a lack of empirical studies exploring the combined influence of reading attitude, reading strategies, and multimodal text comprehension within the Philippine context. Addressing this gap can inform evidence-based literacy interventions that align with contemporary learning modalities.

Hence, this study aims to examine the reading attitudes, reading strategies, and multimodal text comprehension of junior high school students of NONSHS. By identifying the relationships, the research seeks to provide insights that will serve as the foundation for a school-based reading intervention program.

## OBJECTIVES OF THE STUDY

This investigation focused on the Reading Attitude, Reading Strategies and Multimodal texts comprehension as basis for Reading Intervention Program in Distance Learning Modality in Negros Occidental National Science High School (NONSHS), Victorias City SY 2022-2023.

Specifically, it seeks to answer the following questions:

1. What is the socio-demographic profile of the respondents in terms of:
  - a. Sex, and
  - b. Year level?
2. What is the extent of reading attitude of the respondents as a whole and in terms of:
  - a. passive reading,
  - b. active reading,
  - c. selective reading, and
  - d. reflective reading?
3. What is the extent of respondents' use of Reading Strategies as a whole and in terms of:
  - a. Global Reading strategies,
  - b. Problem- solving strategies, and
  - c. Support strategies?
4. What is the level of multimodal text comprehension of the respondents?
5. Is there a significant difference on respondents' use of Reading Strategies when grouped according to their Profile?
6. Is there a significant difference on the reading attitude of the respondents when grouped according to their Profile?
7. Is there a significant difference in multimodal text comprehension among the respondents when grouped according to their Profile?
8. Is there a significant difference between the reading attitude and the use of Reading strategies of the respondents?
9. Is there a significant association between the reading attitude and the level of multimodal text comprehension of the respondents?
10. Is there a significant relationship between the reading strategies and the level of multimodal text comprehension of the respondents?
11. What intervention program may be proposed?

## METHODOLOGY

This section proposed the research design, contributors of the study, distribution of the study, sampling techniques, data gathering instrument, validity and reliability of instrument, data gathering procedure, and data treatment and analysis.



## Research Design

For this study, the Descriptive Survey Method was employed. According to Creswell and Creswell (2018), a survey design provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population. This method was appropriate for the present study because it sought to gather information on junior high school students' reading attitudes, reading strategies, and comprehension of multimodal texts in the context of distance learning.

Similarly, Subia (2018) explained that descriptive survey research is widely used in educational settings since it allows researchers to collect quantifiable information from respondents, summarize it statistically, and describe the prevailing conditions of a population. In this study, the survey design enabled the researcher to describe the students' reading-related practices and difficulties without manipulating any variable.

Unlike experimental research, descriptive survey does not control variables but instead focuses on providing a detailed account of the “what is” regarding the phenomenon (Bhandari, 2022). This aligns with the goal of this research—to establish baseline data on reading attitudes, strategies, and multimodal comprehension as the foundation for a reading intervention program.

## Locale of the Study

This study was conducted at Negros Occidental National Science High School (NONSHS), located in Victorias City, Negros Occidental, Philippines, school year 2022-2023. NONSHS is a premier public secondary institution under the Department of Education, recognized as the regional science high school for Western Visayas. The school caters to academically gifted and science-inclined students from various parts of the province and nearby areas.

## Respondents of the Study

The respondents of this study were the Junior High School students of Negros Occidental National Science High School (NONSHS), Victorias City, for the School Year 2022–2023. The total population consisted of three hundred ninety-seven (397) students, of which one hundred fifty-five (155) were male and two hundred forty-two (242) were female. To determine the representative sample, Slovin's formula was applied with a margin of error of 5%. Using this computation, a total of one hundred ninety-nine (199) respondents were identified from the population. The selection of respondents was carried out using simple random sampling to ensure that every student had an equal chance of being included, thereby minimizing bias and ensuring fair representation.

In choosing the respondents, several criteria were considered. First, only those who were officially enrolled as Junior High School students (Grades 7–10) at NONSHS during the School Year 2022–2023 were included. Second, participation was voluntary, and students were selected only if they and their parents or guardians provided consent. Third, representation across all grade levels was ensured so that the sample reflected the varied experiences of Junior High School students. Fourth, respondents must have had prior or current engagement in distance learning modalities, such as online, modular, or blended learning, since the study was anchored on this context. Finally, the respondents were determined through random selection to avoid bias in the sampling process. These criteria ensured that the chosen respondents accurately represented the Junior High School population and provided reliable data for examining reading attitudes, strategies, and multimodal text comprehension.

**Table 1**

*Distribution of the Participants*

Grade Level	Male		Female		Total Population (N)	Total Sample (n)
	N	n	N	n		
Grade 7	45	22	57	29	102	51
Grade 8	49	20	72	38	112	56
Grade 9	30	15	65	33	95	48
Grade 10	40	20	48	24	88	44



## ***Research Instrument***

The research instrument is composed of three parts: (A) a researcher-made questionnaire (respondent profile + Reading Attitude scale), (B) an established strategy inventory adapted from Mokhtari & Reichard (2002) to measure reading strategies, and (C) a Reading Comprehension Test (24 items) designed to measure Junior High students' comprehension of multimodal texts in a distance-learning context. Each instrument and the procedures undergone validation, scoring, administration, and reliability testing.

The purpose of research-made questionnaire is to collect background information and to measure students' *reading attitude* (their dispositions, motivation, and interest toward reading in distance learning). And for the second and third part of the questionnaire from Metacognitive Awareness of Reading Strategies Inventory (MARSII) is a well-validated, widely used self-report instrument designed to measure students' awareness and reported use of reading strategies when engaging with academic or school-related materials. It yields subscale scores that distinguish among global, problem-solving, and support strategies, providing a useful taxonomy for examining the types of strategies students employ in their reading. This framework is particularly relevant in the context of multimodal and distance learning, as it highlights how learners approach and regulate their reading processes. To complement this, a Reading Comprehension Test was constructed to assess junior high school students' comprehension of multimodal texts commonly used in distance education, such as passages accompanied by images, short narrated clips with transcripts, and infographics. This test serves as the objective measure of the dependent variable—multimodal text comprehension—which will then be correlated with students' reported reading attitudes and strategy use.

## ***Validity and Reliability of the Instrument***

The researcher-made questionnaire underwent content validation by three (3) experts in English and Research to ensure its clarity, relevance, and alignment with the study objectives. Based on their evaluation, the instrument obtained a validity score of 3.9, which indicated strong content validity. Content validation by subject matter experts remains a critical step in instrument development to ensure the appropriateness of items (Taherdoost, 2020). To further establish the quality of the tool, a reliability test was conducted using Cronbach's Alpha, which yielded a coefficient of 0.938. According to Taber (2018), a Cronbach's Alpha value above 0.9 reflects excellent internal consistency. Ensuring both the validity and reliability of research instruments is essential in educational and social sciences to maintain the integrity and trustworthiness of collected data (Heale & Twycross, 2021).

## ***Data Gathering Procedure***

Permission was sought from the Schools Division Superintendent to formally conduct the study. Upon receiving approval, the researcher also secured authorization from the school administrators, and the respective class advisers. Following these approvals, the researcher distributed the online questionnaires through Google Forms, which were posted in the designated Google Classrooms of the target participants. Once the questionnaires had been completed, the researcher collected and organized the responses for data analysis.

The process, however, was not without its challenges. One major concern was the dependence on students' access to stable internet and available gadgets. Those in areas with weak connectivity often experienced delays in answering the forms, while some needed reminders from their advisers or the researcher before they could complete the survey. Another limitation was the nature of the online format, which made it difficult to ensure that all respondents answered the items with full attention.

Despite these hurdles, most students were able to submit their responses within five to seven days after the forms were released. A few participants took longer due to connectivity issues or other constraints. This slightly prolonged the data-gathering process, but with follow-ups and coordination, the researcher was able to retrieve the needed responses in full.

## **RESULTS AND DISCUSSION**

This section represents the results and discussions after the data had been collected and tabulated.

### ***Profile of the Respondents***

This portion show the socio-demographic profile of the respondents in terms of sex and year level using frequency and percentage as a tool.



Table 1 presents the frequency and percentage distribution of the respondents according to their year level and sex. As shown, the largest group of respondents were Grade 8 students, comprising 56 individuals or 28.1% of the total sample. This was followed closely by Grade 7 students with 51 respondents (25.6%), Grade 9 students with 47 respondents (23.6%), and Grade 10 students with 45 respondents (22.6%). These figures indicate a relatively balanced representation across the junior high school levels, with a slight predominance of students in the lower grades (Grade 7 and 8), reflecting a youthful population in the early stages of secondary education.

In terms of sex distribution, the data reveals that the majority of the respondents were female, totaling 122 or 61.3% of the sample. Meanwhile, male students accounted for 77 respondents or 38.7%. This disparity suggests a greater participation or enrollment of female students in the schools sampled, which may influence trends in academic engagement or responses related to the study's variables.

Overall, the socio-demographic data suggest a diverse yet predominantly female group of junior high school students, with most respondents concentrated in the Grade 7 and Grade 8 levels. This distribution provides a representative overview of the target population and serves as a valuable context for interpreting the study's findings.

**Table 1**

*Profile of the respondents*

Profile	Frequency (f)	Percentage (%)
<b>Year Level</b>		
Grade 7	51	25.6
Grade 8	56	28.1
Grade 9	47	23.6
Grade 10	45	22.6
<b>Sex</b>		
Male	77	38.7
Female	122	61.3
<b>Total</b>	<b>199</b>	<b>100.0</b>

*Extent of reading attitude of the respondents*

The table 2 presents the mean and standard deviation of junior high school students' reading attitudes across four categories: Passive Reading, Active Reading, Selective Reading, and Reflective Reading. Passive Reading shows a total mean of 2.4 (Low), with the highest individual score at 2.58 and the lowest at 2.18. Active Reading has a total mean of 3.15 (Moderate), with the highest score at 3.41 and the lowest at 2.934. Selective Reading totals 2.73 (Moderate), with the highest mean of 2.9648 and the lowest of 2.44. Reflective Reading scores a total mean of 3.13 (Moderate), with the highest at 3.31 and the lowest at 3.02. Overall, the students' reading attitudes are interpreted as Moderate, with a total mean of 2.87 and a standard deviation of .278. This indicates a generally positive but not highly enthusiastic attitude towards reading among junior high school students.

Junior high school students exhibit a moderate attitude towards reading, there is significant potential for improvement through targeted educational strategies that promote active engagement and critical thinking in reading practices.

Recent studies confirm that junior high students often demonstrate a moderate attitude toward reading, consistent with the present findings. Concepcion-Rubas (2024) reported that learners in Solano High School showed moderate attitudes toward reading, shaped by material preferences. Similarly, Moneba and Lovitos (2024) found that while Grade 6 learners had positive reading attitudes and motivation, comprehension outcomes remained only moderate. Another study by Alpaslan and Yalçın



(2024) likewise noted that students' attitudes are generally positive but not highly enthusiastic, emphasizing the need for more engaging and reflective practices.

These findings suggest that while students in the present study show moderately positive attitudes in passive, active, selective, and reflective reading, there is still room for improvement. Targeted interventions such as varied and appealing materials, reflective reading activities, and motivational programs could help move students from moderate toward strong reading attitudes, which in turn may enhance comprehension.

**Table 2**

*Extent of reading attitude of the respondents*

Reading Attitude	Mean	SD	Int
1. I rush what I read most of the time to get it done.	2.58	.753	M
2. I tend to immediately forget the material that I have read.	2.49	.634	L
3. I read while doing something like texting, watching television in the background, or navigating social media sites.	2.48	.823	L
4. I read to help lull myself to sleep.	2.56	.801	M
5. I read without paying much attention on details and techniques of the writers.	2.18	.764	L
<b>Passive Reading Mean</b>	<b>2.46</b>	<b>.385</b>	<b>L</b>
1. I read to understand the message of the text.	3.41	.587	M
2. I read to evaluate the relevance of the text.	3.23	.598	M
3. I read and ask questions to determine the purpose of the text.	3.13	.583	M
4. I read to determine the strategies and techniques used by the writer.	2.94	.701	M
5. In reading I can carefully adjust my attention level and the necessity of thoroughly analyzing the text.	3.02	.635	M
<b>Active Reading Mean</b>	<b>3.15</b>	<b>.439</b>	<b>M</b>
1. In reading I go directly to the part of the text where I can obtain the information I need.	2.89	.709	M
2. I only select the most important information from the whole text instead of going through everything.	2.86	.814	M
3. In reading books, I often read the story or text parts that do entertain me and skip the other parts.	2.44	.832	L
4. I only skim through the text and I am oblivious of the trivial and repetitious details offered by the author.	2.52	.688	M
5. I read with particular purpose in mind and only pick out the parts of the text that may serve or may address such purpose.	2.97	.684	M
<b>Selective Reading Mean</b>	<b>2.73</b>	<b>.527</b>	<b>M</b>
1. I read to ponder on the implications of the text to the real-life context.	3.02	.531	M



2. I read to establish connections between the text and my personal experiences.	3.06	.667	M
3. I read to reflect on my personal insights and perspectives with that of the text's context.	3.09	.653	M
4. I read to sympathize or put myself in the point of view of the characters in the text.	3.17	.652	M
5. I read to widen my perspectives in a much bigger concepts like life in general.	3.31	.580	M
<b>Reflective Reading Mean</b>	<b>3.13</b>	<b>.462</b>	<b>M</b>
<b>Overall Mean Reading Attitude</b>	<b>2.87</b>	<b>.278</b>	<b>M</b>

### Scaling:

4.50 – 5.00 Very High (VH)	1.50 – 2.49 Low (L)
3.50 – 4.49 High (O)	1.00 – 1.49 Very Low (VL)
2.50 – 3.49 Moderate (M)	

### Extent of respondents' use of Reading Strategies

The table 3 shows the mean and standard deviation of the extent of respondents' most implemented/ utilized Reading Strategies in terms of Global Reading Strategies, Problem Solving Strategies and Support Strategies.

Under Global Reading Strategies, statement "I use typographical features like bold face and italics to identify key information." has the highest of 4.03 with a standard deviation of 1.061 interpreted as high and statement "I think about what I know to help me understand what I read." has the lowest mean of 3.08 with a standard deviation of 1.154 interpreted as Moderate. Global Reading Strategies has a total mean of 3.46 with a standard deviation of .693 interpreted as Moderate. This implies that there is a potential gap in comprehensive reading instruction, emphasizing the need for a more balanced approach that strengthens all aspects of global reading strategies. To address this, educators should integrate activities that not only leverage visual aids but also actively promote cognitive engagement.

Under Support Strategies, statement "I read slowly and carefully to make sure I understand what I am reading" got the highest mean of 4.03 with a standard deviation of 1.012 interpreted as High Extent and statement "I try to get back on track when I lose concentration." got the lowest mean of 2.86 with a standard deviation of 1.214 interpreted as Moderate. Support Strategies has a total mean of 3.52 with a standard deviation of .819 interpreted as high. This suggests that while students are good at ensuring comprehension through careful reading, they may need more support in sustaining attention and concentration.

Under problem solving strategies, statement "I adjust my reading speed according to what I am reading." got the highest mean of 4.19 with a standard deviation of 1.06 interpreted as High and statement "When text becomes difficult, I re-read it to increase my understanding." got the lowest mean of 2.84 with a standard deviation of 1.297 interpreted as Moderate. Problem Solving Strategies has a total mean of 3.54 with a standard deviation of .706 interpreted as high. It suggests that students are generally confident in their ability to overcome challenges during reading. However, the difference in how often they use adaptive reading speed versus re-reading indicates a potential imbalance in their problem-solving approach.

As a whole, the extent of respondents' most implemented/ utilized Reading Strategies in terms of Global Reading Strategies, Problem Solving Strategies and Support Strategies has a total overall mean of 3.51 with a standard deviation of .706 interpreted as high. It indicates that students are largely proficient in employing a diverse array of reading strategies. This reflects their active engagement with texts and their ability to apply various methods to improve their comprehension. It suggests that students are not only aware of different strategies but are also effectively integrating them into their reading practices to better understand and process the material.

Similarly, a recent study by [Click, Think, Read (2025)] in Malaysia found that while students generally have high overall proficiency in metacognitive reading strategies, there is notable variability in how often they use support strategies versus global or problem-solving strategies. This supports the idea that even proficient students may benefit from interventions that ensure consistency across different types of strategies.

**Table 3**

### Extent of respondents' use of Reading Strategies



Reading Strategies	Mean	SD	Int
1. I have a purpose in mind when I read.	3.53	.983	H
2. I think about what I know to help me understand what I read.	3.08	1.154	M
3. I take an overall view of the text to see what it is about before reading it.	3.84	1.084	H
4. I think about whether the content of the text fits my reading purpose.	3.72	1.119	H
5. I review the text first by noting its characteristics like length and organization.	3.53	1.278	H
6. When reading, I decide what to read closely and what to ignore.	3.36	1.091	M
7. I use tables, figures, and pictures in text to increase my understanding.	3.86	1.025	H
8. I use context clues to help me better understand what I am reading.	3.18	1.201	M
9. I use typographical features like bold face and italics to identify key information.	4.02	1.061	H
10. I critically analyze and evaluate the information presented in the text.	3.05	1.302	M
11. I check my understanding when I come across new information.	3.71	1.139	H
12. I try to guess what the content of the text is about when I read.	3.09	1.157	M
13. I check to see if my guesses about the text are right or wrong.	3.20	1.217	M
<b>Global Reading Strategies Mean</b>	<b>3.476</b>	<b>.693</b>	<b>M</b>
1. I take notes while reading to help me understand what I read.	4.03	1.011	H
2. When text becomes difficult, I read aloud to help me understand what I read.	2.86	1.214	M
3. I underline or circle information in the text to help me remember it.	3.53	1.095	H
4. I use reference materials (e.g. a dictionary) to help me understand what I read.	3.57	1.121	H
5. I paraphrase (restate ideas in my own words) to better understand what I read.	3.51	1.201	H
6. I go back and forth in the text to find relationships among ideas in it.	4.00	1.103	H
7. I ask myself questions I like to have answered in the text.	3.22	1.325	M
8. When reading, I translate from English into my native language.	3.36	1.105	M
9. When reading, I think about information in both English and my mother tongue.	3.61	1.131	H
<b>Support Strategies Mean</b>	<b>3.52</b>	<b>.819</b>	<b>H</b>
1. I read slowly and carefully to make sure I understand what I am reading	3.82	1.042	H
2. I try to get back on track when I lose concentration.	3.53	1.179	H
3. I adjust my reading speed according to what I am reading.	4.19	1.061	H
4. When text becomes difficult, I pay closer attention to what I am reading.	3.46	1.158	M
5. I stop from time to time and think about what I am reading.	3.73	1.166	H



6. I try to picture or visualize information to help remember what I read.	3.45	1.166	M
7. When text becomes difficult, I re-read it to increase my understanding.	2.84	1.297	M
8. When I read, I guess the meaning of unknown words or phrases.	3.35	1.324	M
<b>Problem Solving Strategies Mean</b>	<b>3.54</b>	<b>.803</b>	<b>H</b>
<b>Reading Strategies Overall Mean</b>	<b>3.51</b>	<b>.706</b>	<b>H</b>

*Scaling:*

4.50 – 5.00 Very High (VH)	1.50 – 2.49 Low (L)
3.50 – 4.49 High (H)	1.00 – 1.49 Very Low (VL)
2.50 – 3.49 Moderate (M)	

**Level of Multimodal Text Comprehension of the Respondents**

Table 4 presented the level of multimodal text comprehension among junior high school students by grade level. It was found that Grades 7, 8 and 9 students both exhibited a moderate level of comprehension, with mean scores of 12.50 (SD = 3.607), 14.00 (SD = 3.702) and , 15.32 (SD = 2.927), respectively. In contrast, Grade 10 students demonstrated a high level of comprehension, with mean scores of 16.09 (SD = 3.036). The overall mean score for multimodal text comprehension across all year levels was 15.19 (SD = 3.641), which still fell under the moderate category based on the given scale. These findings implied that as students progressed through higher grade levels, their ability to interpret and understand multimodal texts. This trend may be attributed to their increased exposure to various forms of media, reading experiences, and more advanced cognitive skills developed over time.

The results were supported by the study of Akçay and Akçay (2021), who found that older students exhibited higher multimodal reading comprehension due to their increasing experience with digital texts and critical media literacy. Likewise, the study of Li and He (2023) emphasized the role of curriculum design in enhancing multimodal text comprehension, suggesting that well-structured, grade-appropriate integration of multimodal resources significantly boosts students’ engagement and understanding. These studies affirmed that multimodal literacy is not static but evolves with instructional support, cognitive development, and regular interaction with multimodal texts across grade levels.

**Table 4**

*Level of multimodal text comprehension of the respondents*

Year Level	Mean	SD	Int
Grade 7	12.50	3.607	M
Grade 8	14.00	3.702	M
Grade 9	15.32	2.927	M
Grade 10	16.09	3.036	H
<b>Multimodal Text comprehension</b>	<b>15.19</b>	<b>3.641</b>	<b>M</b>

*Scaling:*

21.00 – 24.00 Very High (VH)	6.00 – 10.99 Low (L)
16.00 – 20.99 High (H)	0 – 5.99 Very Low (VL)
11.00 – 15.99 Moderate (M)	

**Difference on respondents’ use of reading strategies when group to their profile**



Table 5.a presents the analysis of the significant difference in the respondents' most utilized reading strategies—Global Reading Strategies, Support Strategies, and Problem Solving Strategies—when grouped according to their year level (Grade 7 to Grade 10).

The findings of the study revealed a significant difference in the respondents' use of support strategies when grouped according to year level, while no significant differences were found in their use of global and problem-solving strategies. This result indicates that students across grade levels tend to apply global and problem-solving strategies in relatively similar ways, whereas the use of support strategies varies more noticeably. Specifically, Grade 9 students registered higher use of support strategies compared to other year levels, suggesting that learners in this stage rely more on tools such as re-reading, using reference aids, and seeking external help to facilitate comprehension.

This aligns with the results of Mokhtari and Sheorey's MARS framework, which highlights the importance of support strategies in bridging comprehension gaps. Recent studies support this outcome: a Malaysian study on digital academic reading (2019) found that less proficient readers tend to rely heavily on support strategies to process texts effectively, while higher-proficiency students adopt more problem-solving strategies. Similarly, a large-scale meta-analysis (Frontiers in Psychology, 2021) confirmed that reading strategies significantly enhance comprehension, though higher-grade students generally show greater proficiency in metacognitive, problem-solving approaches. In addition, Linder and Falk-Ross (2024) emphasized that younger adolescents benefit from explicit integration of multimodal reading strategies, with support strategies being especially useful as scaffolding tools.

A more recent intervention using infographics (SpringerOpen, 2025) demonstrated that multimodal materials further enhance reading comprehension when learners are trained to combine support strategies with global and problem-solving approaches. Taken together, these findings imply that junior high school teachers should provide differentiated instruction tailored to year level: younger learners may require scaffolding through explicit teaching of support strategies, while higher-year students should be guided to refine their global and problem-solving strategies for deeper comprehension of multimodal texts. This has significant implications for designing reading intervention programs that are both age-appropriate and responsive to learners' varying strategy needs.

**Table 5.a**

*Significant difference on respondents' use of reading strategies when group to their profile when group to their year level*

Year level	Global Reading Strategies	Support Strategies	Problem Solving Strategies
Grade 7	96.65	85.87	89.43
Grade 8	90.87	93.38	92.67
Grade 9	118.43	120.46	116.31
Grade 10	95.92	102.89	104.07
Grade 7	96.65	85.87	89.43
<b>P-value</b>	.085	.020	.084
<b>Conclusion</b>	<b>Not Sig.</b>	<b>Sig.</b>	<b>Not Sig.</b>

*Legend:*

*Significant if p-value is lesser than 0.05*

*Not Significant is greater than 0.05*

Table 5.b showed the significant difference in the reading strategies most implemented or utilized by junior high school students when grouped according to their sex. The results indicated that male students had slightly higher mean rank scores in all three types of reading strategies: Global Reading Strategies (101.86), Support Strategies (101.84), and Problem-Solving Strategies (103.25). In comparison, female students had slightly lower mean rank scores: 98.82 for Global, 98.84 for Support, and 97.95 for Problem-Solving strategies. Although these differences in mean rank scores suggested a small trend of males being slightly more active in strategy use, the differences were statistically not significant, as reflected in the p-values of .717, .720, and .527 respectively—all of which were greater than the 0.05.



These findings implied that sex did not significantly influence the students' use of reading strategies, supporting the idea that strategic reading behavior is not strongly determined by gender but more likely shaped by other factors such as exposure to reading materials, reading motivation, and instructional practices. This conclusion was consistent with the findings of Nguyen and Doan (2021), who reported that both male and female students displayed similar levels of metacognitive strategy use when given equal access to reading tools and guided instruction. Similarly, Lozano and Reyes (2022) found no significant gender-based differences in reading strategy use among middle school students, emphasizing that students' reading strategy choices were more closely linked to academic support and reading comprehension goals rather than sex. Additionally, Wang and Zhou (2023) suggested that the integration of digital reading platforms has further minimized the gender gap in reading behaviors, as both male and female students now access similar tools and reading experiences.

**Table 5.b**

*Significant difference on respondents' use of reading strategies when group to their profile when group to their Sex*

Sex	Global Reading Strategies	Support Strategies	Problem Solving Strategies
Male	101.86	101.84	103.25
Female	98.82	98.84	97.95
<b>P-value</b>	.717	.720	.527
<b>Conclusion</b>	<b>Not Sig.</b>	<b>Not Sig.</b>	<b>Not Sig.</b>

*Legend:*

*Significant if p-value is lesser than 0.05*

*Not Significant is greater than 0.05*

### ***Difference on Reading Attitude of the Respondents When Grouped According To Their Profile***

This portion shows the significant difference on reading attitude of the respondents when grouped according to their Profile using Mann-Whitney Test and Kruskal-Wallis Test

Table 6.a presents the analysis of the significant difference in the reading attitude of junior high school students when grouped according to their year level—from Grade 7 to Grade 10—across four domains: Passive Reading, Active Reading, Selective Reading, and Reflective Reading.

Among the different grade levels, students in Grade 9 exhibited the highest mean ranks in Passive Reading (106.78), Selective Reading (106.54), and notably in Reflective Reading (117.17). These results suggest that Grade 9 students tend to show more thoughtful, evaluative, and discerning reading behaviors compared to other year levels. This may reflect increased maturity or a higher level of engagement with complex texts introduced at this stage of junior high school.

In contrast, Grade 8 students recorded the lowest mean ranks in three of the four domains—Passive Reading (90.17), Selective Reading (90.47), and Reflective Reading (93.49)—which may indicate less developed or more passive reading habits. Meanwhile, Grade 7 students scored the highest in Active Reading (115.26) and showed strong performance in Selective Reading (110.33), possibly reflecting initial enthusiasm or curiosity at the start of their junior high school journey. Grade 10 students, however, had slightly lower scores across all domains, particularly in Reflective Reading (89.16), potentially indicating waning interest in reading as academic pressure increases or students shift focus toward examinations and graduation.

Despite these observable differences in mean ranks, the statistical analysis showed that none of the differences were significant, as the p-values for all domains were above the 0.05 threshold (Passive Reading = .472, Active Reading = .152, Selective Reading = .216, Reflective Reading = .081). Therefore, it can be concluded that year level did not significantly influence students' reading attitudes in this sample.

These findings align with prior research by Li and Tseng (2021), who noted that while reading behaviors may vary with educational stage, factors such as intrinsic motivation and instructional quality exert a stronger influence on reading attitudes. Lestari and Wahyuni (2022) also emphasized that teacher facilitation and reading program structure play more vital roles in shaping attitudes than grade level alone. Moreover, Wang et al. (2023) observed that due to increased access to multimodal



digital content, students across grade levels are exposed to similar reading environments, thus minimizing developmental differences in reading attitudes.

**Table 6.a**

*Significant difference on the reading attitude of the respondents according to their profile when group to their Year Level*

Year Level	Passive Reading	Active Reading	Selective Reading	Reflective Reading
Grade 7	102.80	115.26	110.33	100.89
Grade 8	90.17	93.13	90.47	93.49
Grade 9	106.78	98.74	106.54	117.17
Grade 10	101.98	92.56	93.31	89.16
Grade 7	102.80	115.26	110.33	100.89
<b>P-value</b>	.472	.152	.216	.081
<b>Conclusion</b>	<b>Not Sig.</b>	<b>Not Sig.</b>	<b>Not Sig.</b>	<b>Not Sig.</b>

*Legend:*

*Significant if p-value is lesser than 0.05*

*Not Significant is greater than 0.05*

Table 6.b illustrated the significant difference in the reading attitudes of junior high school students when grouped according to their sex, across four reading domains: passive, active, selective, and reflective reading. The findings showed that female students scored higher mean rank in passive reading (105.43) and selective reading (100.54), while male students scored higher in active reading (108.44) and reflective reading (105.69). These differences in mean scores suggested that male students tended to be more engaged in interactive and evaluative reading tasks, whereas female students showed more preference for reflective and selective reading activities. However, when tested statistically, none of these differences were found to be significant, as all p-values were greater than the 0.05 threshold: passive reading (.090), active reading (.097), selective reading (.867), and reflective reading (.260). Therefore, the conclusion drawn was that sex did not significantly influence the reading attitudes of junior high school students.

The lack of significant difference aligns with recent studies suggesting that while there may be observable trends in reading preferences between males and females, these do not always translate into statistically significant disparities in attitude. For example, the study by Lin and Chang (2021) found that although girls often engage more with narrative texts and boys with informational texts, both sexes showed similar attitudes toward reading when provided with choice and diverse reading materials. Additionally, Chen and Chuang (2022) emphasized that environmental and instructional factors—such as access to engaging texts and teacher encouragement—were more influential in shaping reading attitudes than biological sex. Similarly, Ahmad et al. (2023) highlighted that gender-based reading differences continue to narrow, especially in technology-rich classrooms where both male and female students access multimodal texts equally.

**Table 6.b**

*Significant difference on the reading attitude of the respondents according to their profile when group to their Sex*

Sex	Passive Reading	Active Reading	Selective Reading	Reflective Reading
<b>Male</b>	91.39	108.44	99.15	105.69
<b>Female</b>	105.43	94.68	100.54	96.41
<b>P-value</b>	.090	.097	.867	.260



Conclusion

Not Sig.

Not Sig.

Not Sig.

Not Sig.

Legend:

Significant if p-value is lesser than 0.05

Not Significant is greater than 0.05

Relationship Between The Reading Attitude and the Level of Multimodal Text Comprehension of the Respondents

This shows the relationship between the reading attitude and the level of multimodal text comprehension of the respondents using Spearman's rho.

Table 7 presented the significant relationship between reading attitude and reading strategies among junior high school students. The computed Pearson correlation coefficient yielded an r-value of .228 with a p-value of .001, which is less than the 0.05 level of significance. This result led to the rejection of the null hypothesis, confirming that a statistically significant relationship exists between the two variables. Although the strength of the relationship is categorized as a negligible positive correlation, it suggests that as students' attitudes toward reading improve, their use of reading strategies tends to increase slightly as well. This implies that students with more favorable attitudes toward reading are more likely to engage in behaviors such as predicting, questioning, clarifying, and summarizing while interacting with texts.

These findings support the study of Liu and Wang (2021), who emphasized that even low to moderate correlations between attitude and strategy use are meaningful in shaping students' overall reading performance. Similarly, Zhang and Foo (2022) highlighted that while attitude alone does not strongly predict strategic reading behavior, positive dispositions toward reading do foster a more active engagement in comprehension strategies. Therefore, enhancing students' reading attitudes may still contribute to better reading strategy use, even if the relationship remains minimal.

Table 7

Significant relationship between the reading attitude and the reading strategies of the respondents

Reading Attitude Vs	r	Strength of Relationship	p-value	Decision	Interpretation
Reading strategies	.228	Negligible Positive Relationship	.001	Reject the null hypothesis	The relationship between the variables is statistically significant

Legend:

Significant if p-value is lesser than 0.05

Not Significant is greater than 0.05

Correlation Scaling:

.90 – 1.00 Very High Positive Relationship

.70 – .90 High Positive Relationship

.50 - .70 Moderate Positive Relationship

.30 - .50 Low Positive Relationship

.00 - .30 Negligible Relationship

Significant Difference of Multimodal Text Comprehension of the Respondents when Grouped According to Their Profile

Table 8 presented the significant difference in multimodal text comprehension among junior high school students when grouped according to their socio-demographic profile— year level and sex. The findings revealed a significant difference in the multimodal text comprehension of junior high school students when grouped according to their year level, as shown by a p-value of .000, which is less than the 0.05 level of significance. This indicates that students' ability to comprehend multimodal texts significantly varied across grade levels. Post hoc analysis using mean rank scores further supported this result. Grade 10 students had the highest mean rank of 126.69, followed by Grade 9 with 114.47, Grade 8 with 94.02, and Grade 7 with the lowest mean rank of 69.69. The superscript letters indicated that Grade 10 students significantly outperformed those in Grades 7 and 8, while Grade 9 students also performed better than the lower levels but did not significantly differ from Grade 10. These findings suggest that as students progress to higher year levels, their comprehension of multimodal texts improves, likely due to increased academic exposure, cognitive maturity, and experience in processing complex digital and visual information. This



supports the studies of Wang and Tsai (2022), who emphasized the correlation between age, schooling, and multimodal literacy, as well as Almeida and Costa (2021), who observed that students in higher grades exhibit greater comprehension skills due to their familiarity with integrated digital learning environments.

On the other hand, when students were grouped according to sex, the p-value of .85 indicated no significant difference in their multimodal text comprehension. The mean rank for male students was 99.09, while female students had a comparable mean rank of 100.57. These results show that sex did not significantly influence how students understood multimodal texts, suggesting that both male and female learners have relatively equal competencies in this area when provided with similar learning conditions. This finding is consistent with the studies of Hernández and Lee (2023), and Lozano and Reyes (2022), who emphasized that equal access to digital resources and quality instruction plays a more vital role in developing multimodal comprehension than gender-based differences.

**Table 8**

*Significant difference of multimodal text comprehension among the respondent when group to their profile*

Socio Demographic Profile	Mean Rank	P-value	Decision	Conclusion
<b>Year level</b>				
Grade 7	69.69c			
Grade 8	94.02b			
Grade 9	114.47ab	.000	Reject Ho	Significant
Grade 10	126.69a			
Grade 7	69.69			
<b>Sex</b>				
Male	99.09		Failed to Reject Ho	Not Significant
Female	100.57	.859		

*Legend:*

*Significant if p-value is lesser than 0.05*

*Not Significant is greater than 0.05*

### **Association Between the Reading Attitude and the Level of Multimodal Text Comprehension of the Respondents**

Table 9 presented the significant relationship between reading attitude and the level of multimodal text comprehension among junior high school students. The findings showed that among the four domains of reading attitude, only passive reading had a statistically significant relationship with multimodal text comprehension, with a correlation coefficient of  $r = -.169$  and a p-value of .01. Although the strength of this relationship was classified as negligible, the negative direction implied that as students' passive reading attitudes increased, their multimodal comprehension slightly decreased. This may suggest that students who tend to approach reading with minimal engagement are less likely to comprehend complex multimodal texts effectively. The null hypothesis was rejected for this variable, confirming a significant, though weak, inverse relationship.

On the other hand, the domains of active reading ( $r = -.064, p = .36$ ), selective reading ( $r = -.134, p = .05$ ), and reflective reading ( $r = .098, p = .16$ ) all showed negligible correlations with multimodal text comprehension and were found to be not statistically significant. In these cases, the null hypothesis was not rejected. This indicated that students' attitudes in these specific domains of reading—such as engaging actively with texts, selectively choosing materials, or reflecting on content—did not show a measurable impact on their ability to comprehend multimodal texts.

The significant but negligible negative relationship between passive reading and multimodal comprehension aligned with the study of Chou and Chan (2021), who observed that surface-level reading attitudes tend to hinder comprehension of multimodal content, which requires critical engagement and interaction across modes. Meanwhile, the lack of significant correlation in the other domains supported the findings of Gomez and Serrano (2022), who argued that while reading attitude may influence



traditional comprehension, the comprehension of multimodal texts is more heavily shaped by exposure to digital content, visual literacy skills, and guided instruction. Additionally, Yap and Fernandez (2023) noted that students' success in decoding multimodal texts depended more on strategy use and media familiarity than on self-reported attitudes toward reading, highlighting the unique demands of navigating mixed-text formats.

**Table 9**

*Significant association between the reading attitude and the level of multimodal text comprehension of the respondents*

Multimodal Text Comprehension Vs	R	Strength of Relationship	p-value	Decision	Interpretation
Passive Reading	-.169	<i>Negligible Negative Relationship</i>	.017	Reject the null hypothesis	The relationship between the variables is statistically significant
Active Reading	-.064	<i>Negligible Negative Relationship</i>	.369	Failed to Reject the null hypothesis	The relationship between the variables is not statistically significant
Selective Reading	-.134	<i>Negligible Negative Relationship</i>	.058	Failed to Reject the null hypothesis	The relationship between the variables is not statistically significant
Reflective Reading	.098	<i>Negligible Positive Relationship</i>	.167	Failed to Reject the null hypothesis	The relationship between the variables is not statistically significant

**Legend:**

*Significant if p-value is lesser than 0.05*

*Not Significant is greater than 0.05*

**Correlation Scaling:**

*.90 – 1.00 Very High Positive Relationship*

*.70 – .90 High Positive Relationship*

*.50 - .70 Moderate Positive Relationship*

*.30 - .50 Low Positive Relationship*

*.00 - .30 Negligible Relationship*

## Relationship Between the Reading Strategies and The Level of Multimodal Text Comprehension of the Respondents

This shows the relationship between the reading strategies and the level of multimodal text comprehension of the respondents using Spearman's rho.

Table 10 presented the significant relationship between reading strategies and the level of multimodal text comprehension among junior high school students. Among the three types of reading strategies—Global Reading Strategies, Support Strategies, and Problem-Solving Strategies—only Support Strategies showed a statistically significant relationship with multimodal comprehension, with a correlation coefficient of  $r = .170$  and a p-value of  $.01$ . While the strength of the relationship was classified as negligible positive, the statistically significant result indicated that students who more frequently used support strategies (such as rereading, highlighting, and taking notes) were slightly more likely to perform better in comprehending multimodal texts. Therefore, the null hypothesis was rejected for this variable, suggesting that supportive reading behaviors may play a small yet meaningful role in enhancing multimodal literacy.

On the other hand, both Global Reading Strategies ( $r = .119, p = .09$ ) and Problem-Solving Strategies ( $r = .120, p = .09$ ) also showed negligible positive relationships with multimodal comprehension, but their p-values exceeded the 0.05 significance threshold, leading to a decision to fail to reject the null hypothesis. This meant that the use of these strategies—while potentially helpful—did not demonstrate a statistically significant relationship with students' comprehension of multimodal texts in this



study. These results may suggest that although students used a range of reading strategies, only those aimed at actively supporting their understanding (e.g., paraphrasing or using external cues) had a slight influence on their comprehension performance. These findings were supported by Rahimi and Soleimani (2021), who emphasized that support strategies—particularly those involving metacognitive regulation—positively influence students' comprehension of multimodal texts. They highlighted that as texts become more complex learners benefit more from scaffolded strategies. Likewise, Dela Cruz and Ramos (2022) found that students who engaged in consistent support strategies outperformed their peers in navigating infographics and interactive digital reading tasks.

**Table 10**

*Significant relationship between the reading strategies and the level of multimodal text comprehension of the respondents*

Multimodal Text Comprehension Vs	R	Strength of Relationship	p-value	Decision	Interpretation
Global Reading Strategies	.119	<i>Negligible Positive Relationship</i>	.094	Failed to Reject the null hypothesis	The relationship between the variables is not statistically significant
Support Strategies	.170	<i>Negligible Positive Relationship</i>	.016	Reject the null hypothesis	The relationship between the variables is statistically significant
Problem-solving strategies	.120	<i>Negligible Positive Relationship</i>	.091	Failed to Reject the null hypothesis	The relationship between the variables is not statistically significant

*Legend:*

*Significant if p-value is lesser than 0.05*

*Not Significant is greater than 0.05*

*Correlation Scaling:*

*.90 – 1.00 Very High Positive Relationship*

*.70 – .90 High Positive Relationship*

*.50 - .70 Moderate Positive Relationship*

*.30 - .50 Low Positive Relationship*

*.00 - .30 Negligible Relationship*

### **Summary of findings**

The study examined the reading attitudes, reading strategies, and multimodal text comprehension of junior high school students, considering their year level and sex. A total of 199 respondents participated, primarily from Grades 7 to 10, with a higher proportion of females than males.

Results showed that students had a moderate overall reading attitude. Among the three domains, Active Reading and Reflective Reading had the highest mean scores, indicating a tendency for students to think critically and make personal connections while reading. Passive Reading had the lowest mean, suggesting limited engagement in reading for some students.

In terms of reading strategies, students reported a high level of overall use. The most frequently used were Problem-Solving Strategies and Support Strategies, while Global Reading Strategies were used at a moderate level. These results reflect that students actively employ practical methods to aid their comprehension.

With regard to multimodal text comprehension, the results indicated a moderate level of performance. Higher comprehension scores were observed among Grade 9 and 10 students, implying that comprehension skills improved with academic progress. A significant difference was found based on year level but no significant difference was observed based on sex.



When grouped by year level and sex, no significant differences were found in the domains of reading attitude and reading strategies. However, a significant difference in Support Strategy use was found across year levels with higher-level students using them more frequently.

Importantly, a significant relationship was found between reading attitude and reading strategies, indicating that students with more positive reading attitudes tended to use more reading strategies. Additionally, a significant but negligible negative correlation existed between Passive Reading Attitude and multimodal comprehension, suggesting that students with a more passive reading disposition performed slightly lower in comprehension. Meanwhile, Support Strategies showed a significant positive correlation with multimodal comprehension, indicating that the use of these strategies may slightly enhance comprehension outcomes.

## CONCLUSION

Based on the findings of the study, it can be concluded that junior high school students demonstrate a generally moderate attitude toward reading and a high level of strategy use in approaching reading tasks. Their engagement is strongest in active and reflective reading, indicating a readiness to think critically and interact with texts meaningfully, though passive reading remains a weaker area. The high use of support and problem-solving strategies reveals that students are resourceful and adaptive in enhancing their reading comprehension.

Multimodal text comprehension among students is at a moderate level, with significantly better performance observed among those in higher year levels, particularly Grades 9 and 10. This suggests that academic maturity contributes to improved comprehension of varied and complex texts. Although no significant differences in reading attitude and strategies were found across sex and year levels, a notable exception was the use of support strategies, which varied significantly by year level, showing increased usage among upper-grade students.

Furthermore, the study confirmed a statistically significant yet negligible positive relationship between reading attitude and reading strategies, implying that students who exhibit more positive attitudes toward reading are more likely to use a range of effective strategies. Additionally, passive reading attitudes were negatively correlated with multimodal comprehension, while support strategies showed a slight but meaningful positive association. These results underscore the importance of nurturing positive reading attitudes and equipping students with practical reading strategies to enhance their comprehension skills, especially in navigating multimodal texts.

## RECOMMENDATIONS

Based on the findings and conclusions drawn from this study, the following recommendations are hereby proposed:

1. Schools Division Superintendent consider the results of this study as empirical input for policymaking and program development related to reading instruction. Specifically, division-wide capacity-building programs should be initiated, focusing on equipping educators with effective reading strategies and enhancing their ability to teach multimodal text comprehension. These efforts may support curriculum enhancement and strengthen the implementation of reading interventions across schools.
2. School administrators must provide sustained technical and instructional support to English teachers. This may be accomplished through the conduct of regular in-service trainings, reading workshops, and the formation of professional learning communities (PLCs). These initiatives should prioritize the development and implementation of support reading strategies, which were shown in the study to significantly influence students' comprehension outcomes.
3. English teachers are encouraged to adopt and integrate the effective support reading strategies identified in this study into their classroom instruction. Teachers should make use of diverse and multimodal reading materials to foster greater student engagement and improve reading comprehension. Furthermore, reflective and active reading techniques may be incorporated to cultivate deeper understanding and critical thinking among learners.
4. Students are recommended to take an active role in their reading development by engaging more fully in classroom reading activities and applying the strategies taught by their teachers. As educators implement more targeted and strategic reading instruction, students may benefit through improved comprehension, increased confidence, and enhanced ability to process varied academic texts.
5. Future researchers must expand on the present study by investigating additional variables that may affect reading attitude, strategy use, and multimodal comprehension. These may include students' socioeconomic status, digital literacy skills, and home literacy environments. Moreover, longitudinal studies may be conducted to determine the sustained impact of reading strategies on students' academic progress over time.



## Conflict of Interest

The author declares that there are no financial or personal relationships that could in any way influence or bias the content of this work.

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