

Reading Competence of Freshmen Maritime Students: Basis for Program Initiatives

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ABSTRACT

This study determined the level of reading competence of freshmen Bachelor of Science in Marine Engineering students at Private Maritime Institution in Bacolod City. during the Academic Year 2025–2026 as a basis for developing program initiatives aimed at enhancing reading skills. Specifically, the study assessed the students' reading competence in the areas of comprehension, critical thinking, and vocabulary and examined whether significant differences existed when respondents were grouped according to sex, high school of origin, parents' educational attainment, and parents' employment status. Guided by Rumelhart's Schema Theory, the study employed a descriptive-comparative research design. A sample of 184 freshmen maritime students was selected from a population of 340 through stratified random sampling. Data were gathered using a validated and reliability-tested reading selection instrument composed of two passages and 48 questions covering comprehension, critical thinking, and vocabulary. Results revealed that the respondents obtained an overall mean score of 33.76, interpreted as High, with comprehension obtaining the highest mean score ($M = 11.84$), followed by critical thinking ($M = 11.40$), while vocabulary registered the lowest mean score ($M = 10.52$). No significant differences were found in reading competence when respondents were grouped according to sex and high school of origin. However, significant differences were observed when grouped according to mothers' educational attainment, indicating that higher maternal educational levels were associated with better reading competence. The findings suggest that although freshmen maritime students generally possess satisfactory reading competence, vocabulary remains an area requiring improvement.

Keywords: Reading competence, freshmen maritime students, reading skills, comprehension, critical thinking skills, vocabulary

INTRODUCTION

Academic success and day-to-day living depend on reading competence. It enables students to acquire information and expand their knowledge, making it one of the most important skills they can develop. As the foundation for learning across all academic disciplines, reading is a fundamental ability that every learner needs to succeed. A strong reading foundation can lead to improved academic performance, more critical thinking skills, and an increased understanding of academic material. However, many college students struggle to comprehend what they read, which hinders their academic growth. As (None Romina M. Adora et al., 2024) emphasizes, strong reading abilities directly influence individual achievement and societal progress.

Reading competence encompasses accurate decoding, effective comprehension, and strategic application of reading techniques (de Blume et al., 2021). According to Chamba and Ramirez-Avila (2021), it is a multidimensional skill involving word recognition, vocabulary development, strategic comprehension, and the ability to integrate textual information with prior knowledge. Together, these elements enable purposeful reading that extends beyond the classroom into real-world application.

A significant concern in the Philippines is college students' reading skills. According to Juwairiah O. et al. (2024) found that just 61.6% of Filipino college students are proficient readers. The low reading proficiency of the students is concerning, primarily because reading skill is associated with both academic success and employability (National Assessment of Educational Progress). Comparing Filipino college students' reading

proficiency with that of their international counterparts is crucial to obtaining a more comprehensive understanding. Globally, the Programmed for International Student Assessment (PISA) offers insightful data on students' reading proficiency. The Philippines took part in the Programmed for International Student Assessment (PISA) for the first time, according to (OECD, 2023). Filipino students scored the lowest globally in PISA, which focused on reading proficiency. Students' reading competency can be evaluated using the Philippine Informal Reading Inventory (Phil-IRI).

METHODOLOGY

Research Design

This study employed a descriptive-comparative research design to assess the reading competence of maritime students in the areas of comprehension, critical thinking, and vocabulary. According to McCombes (2023), descriptive research aims to accurately and systematically describe a population, situation, or phenomenon, answering questions such as what, where, when, and how, but not why. In this context, the descriptive-comparative approach was appropriate as it facilitated the identification and analysis of differences in reading competence among freshmen maritime students when grouped according to sex, high school of origin, parents' educational attainment, and parents' employment status. Furthermore, it determined if significant difference on the level of reading competence of Bachelor of Science in Marine Engineering students along the areas of comprehension, critical thinking, and vocabulary occurred when the respondents grouped according to sex, high school of origin, parents' educational attainment, and parents' employment status.

Subject and Respondents of the Study

The subjects and respondents of the study were freshmen students pursuing a Bachelor of Science in Marine Engineering at VMA Global College and Training Centers Inc. for the Academic Year 2025-2026.

Population and Sample Size

The total population of freshmen students pursuing a Bachelor of Science in Marine Engineering students of VMA Global College and Training Centers Inc. is 340. With the use of the formula by Yamane Technique, a sample size of 184 was computed.

Data Gathering Instrument

To assess the level of reading competence of freshmen maritime students in the areas of comprehension, critical thinking, and vocabulary, two reading selections, "A Fear of Kissing" by David Buckley (2025) and "Aisle Three" by David Buckley (2024), were used to collect data. The instrument consisted of two parts. Part I contained the respondents' profile information, including sex, high school of origin, parents' educational attainment, and parents' employment status. Part II contained two selections with 48 questions designed to assess comprehension, critical thinking, and vocabulary. The manuscript describes the instrument as validated and reliability-tested; however, the specific validity procedure, reliability coefficient, sample used for reliability testing, and resulting coefficient were not reported in the available text. These metrics should be inserted from the actual validation and reliability records before publication.

Data Analyses

The following statistical tools were used in accordance with the objectives of the study.

To determine the profile of the respondents, frequency and percentage distribution were used.

For the descriptive research question, which aimed to determine the level of reading competence of maritime students in the areas of comprehension, critical thinking, and vocabulary when grouped according to sex, high school of origin, parents' educational attainment, and parents' employment status the mean was used.

$$\bar{X} = \frac{\sum X}{N}$$

N

Where:

N = Number of observations

$\bar{X}$ = mean

$\sum X$ = sum of all scores

For the comparative inferential questions, inferential tests were selected according to the number of groups and the distributional characteristics of the data. The Mann–Whitney U test was used for two-group comparisons, such as sex and high school of origin, while the Kruskal–Wallis H test was used for variables with more than two categories, including parents’ educational attainment and parents’ employment status. The level of significance was set at $\alpha = .05$. A p-value below .05 was interpreted as statistically significant and resulted in rejection of the null hypothesis; otherwise, the null hypothesis was not rejected. The manuscript should report the specific normality/assumption test and its results if these were conducted; these values were not stated in the available manuscript.

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

Where:

$\bar{X}_1$ and $\bar{X}_2$ = sample means of group1 and group 2

s_1^2 and s_2^2 = sample variances

n_1 and n_2 = sample sizes of groups 1 and 2

Interpretive Scale for the Level of Reading Competence

Score Range	Description	Verbal Interpretation
0 – 12	Very Poor	Students struggle to identify the main idea and cannot provide supporting details, have minimal understanding of unfamiliar words, cannot relate the text to their experiences, and cannot make inferences from the text.
13 – 24	Poor	Students can identify the main idea but struggle with supporting details, have limited understanding of unfamiliar words, find it difficult to relate the text to their experiences, and have difficulty making inferences from the text.
25 – 36	High	Students can identify the main idea and most supporting details, demonstrate good understanding of unfamiliar words, can relate

		the text to their experiences, and can infer meaning from the text with minor guidance.
37 – 48	Very High	Students can fully identify the main idea and supporting details from the text, demonstrate complete understanding of unfamiliar words, fully relate text to personal experiences or prior knowledge, and can consistently infer and draw conclusions from the text.

RESULTS AND DISCUSSION

This chapter presents the gathered data, its analysis and interpretations, which are supported by tables and discussions of findings, focused mainly on the problem of the study.

Profile of the Respondents

The profile of the respondents in terms of sex, high school of origin, parents' educational attainment, and parents' employment status.

Table 1. Frequency and Percentage Distribution of the Respondents According to Profile.

Profile	Category	f	%
Sex			
	Male	177	96.20
	Female	7	3.80
	Total	184	100.00
High School of Origin			
	Private	69	37.50
	Public	115	62.50
	Total	184	100.00
Parents Educational Attainment			
(Mother)	Elementary Undergraduate	13	7.07
	Elementary Graduate	17	9.24
	High School Undergraduate	14	7.61
	High School Graduate	51	27.72
	College Undergraduate	28	15.22
	College Graduate	61	33.15

	Total	184	100.00
Parents Educational Attainment			
(Father)	Elementary Undergraduate	19	10.33
	Elementary Graduate	19	10.33
	High School Undergraduate	18	9.78
	High School Graduate	50	27.17
	College Undergraduate	28	15.22
	College Graduate	45	24.46
	Not Applicable	5	2.72
	Total	184	100.00
Parents Employment Status (Mother)			
	Employed	68	36.96
	Unemployed	96	52.17
	Self-Employed	18	9.78
	Not Applicable	2	1.09
	Total	184	100.00
Parents Employment Status (Father)			
	Employed	111	60.33
	Unemployed	15	8.15
	Self-Employed	47	25.54
	Not Applicable	11	5.98
	Total	184	100.00

Table 1 presents that in terms of sex, 177 (96.20%) are males and 7 (3.80%) are females. In terms of high school origin, 69 (37.10%) are from private and 115 (62.50%) are from public. In terms of mother's educational attainment, 13 (7.07%) are elementary undergraduate, 17 (9.24%) are elementary graduate, 14 (7.61%) are high school undergraduate, 51 (27.72%) are high school graduate, 28 (15.22%) college undergraduate, 61 (33.15 %) are college graduate. Similarly, in terms of father's educational attainment, 19 (10.33%) are elementary undergraduate, 19 (10.33%) are elementary graduate, 18 (9.78%) are high school undergraduate, 50 (27.17%) are high school graduate, 28 (15.22%) college undergraduate, 45 (24.46 %) are college graduate and 5 (2.72%) are not applicable. With regard to mothers' employment status, 68 (36.96%)

are employed, 96 (52.17%) are unemployed, 18 (9.78%) are self-employed, and only 2 (1.09%) are not applicable. As to fathers' employment status the data reveals that the big percentage of the respondents with 111 (60.33%) are employed, 15 (8.15%) are unemployed, 47 (25.54%) are self-employed, 11 (5.98%) are not applicable. Overall, the data indicate that the majority of the respondents are males, mostly graduated from public high schools. Most come from families whose parents have attained at least secondary education, with mothers generally unemployed and fathers predominantly employed.

Level of Reading Competence of the Respondents

The table reveals the level of reading competence in the areas of comprehension, critical thinking, and vocabulary of a private maritime college for school year 2025-2026 when taken collectively and grouped according to sex, high school of origin, parents' educational attainment, and parents' employment status.

Table 2. Level of Reading Competence of the Respondents When Taken as a Whole and in Terms of Comprehension; Critical Thinking; and Vocabulary.

Reading Competence	N	Mean	Standard Deviation	Interpretation
Comprehension	184	11.84	3.14	Very High
Critical Thinking	184	11.40	3.49	Very High
Vocabulary	184	10.52	3.67	Very High
As a Whole	184	33.76	9.37	High

Sub-score legend used in Table 2: 10–12 = Very High; 7–9 = High; 4–6 = Low; 0–3 = Very Low.

Overall-score legend: 37–48 = Very High; 25–36 = High; 13–24 = Low; 0–12 = Very Low.

The data on table 2 shows that respondents have obtained the highest mean score in comprehension ($M = 11.84$, $SD = 3.14$), followed by critical thinking ($M = 11.40$, $SD = 3.49$), and obtained the lowest mean score in vocabulary ($M = 10.52$, $SD = 3.67$). The respondents obtained the overall mean score of 33.76 with a standard deviation of 9.37. Among the three areas of reading competence, comprehension obtained the highest mean score ($M = 11.84$, $SD = 3.14$). This result indicates that the respondents demonstrated relatively stronger abilities in understanding, interpreting, and deriving meaning from written texts compared to their performance in critical thinking and vocabulary. According to a study by Orellana et al. (2024), reading comprehension is a key academic skill that significantly contributes to students' learning performance and educational success. Students with stronger comprehension abilities demonstrate better academic outcomes because they can effectively process and understand information presented in texts. Similarly, Billao (2026) found that learners with higher reading comprehension levels achieved better academic performance in English. The study emphasized that comprehension skills enable learners to understand, interpret, and apply information more effectively, making comprehension a critical component of literacy development. Additionally, a research by Dixon and Oakhill (2024) further emphasized that reading comprehension is strengthened through instructional practices such as prediction, questioning, and vocabulary instruction. The study noted that effective comprehension instruction enables learners to understand texts more deeply and supports overall literacy development. Meanwhile, the mean score for critical thinking ($M = 11.40$, $SD = 3.49$) indicates that although respondents demonstrate the ability to analyze, infer, and evaluate information presented in texts, these skills are less developed compared to their comprehension abilities. A study by Paige et al. (2024) found that critical thinking significantly contributes to reading comprehension beyond basic linguistic skills. The study demonstrated that learners with stronger critical thinking abilities exhibited better comprehension performance because they were able to analyze and evaluate textual information more

effectively. This supports the finding that comprehension and critical thinking are closely related dimensions of reading competence. Similarly, Ramadhani et al. (2023) reported a significant positive relationship between critical thinking skills and reading comprehension among students. The study concluded that learners who engage in analytical and evaluative thinking while reading tend to achieve higher comprehension outcomes. This finding reinforces the relatively high performance of respondents in comprehension and critical thinking observed in the present study. Vocabulary obtained the lowest mean score among the three areas, indicating that respondents experience greater difficulty in understanding word meanings, contextual clues, and academic vocabulary. This finding suggests that limited vocabulary knowledge may hinder students' ability to fully comprehend complex texts and engage in deeper levels of reading. Since vocabulary serves as a fundamental component of reading competence, insufficient word knowledge can negatively affect both comprehension and critical analysis of texts. The lower performance in vocabulary is consistent with the findings of a recent study conducted by students in Misamis University, Philippines, which revealed that vocabulary skills are strongly associated with reading comprehension. Students with richer vocabulary knowledge demonstrated better understanding of texts, while those with limited vocabulary experienced difficulties in interpreting information and making inferences. Likewise, Liswaniso (2024) emphasized that vocabulary knowledge remains a critical component of reading comprehension and overall literacy development. The study highlighted that learners with broader vocabulary repertoires are better able to process information, understand complex texts, and engage in critical reading tasks. In the Philippine context, Casinillo (2020) found significant relationships between vocabulary knowledge and reading comprehension among learners in Leyte. Their findings indicated that students with stronger vocabulary skills demonstrated better comprehension performance, highlighting the essential role of vocabulary in reading competence. The findings indicate that the freshmen maritime students demonstrated the strongest performance in reading comprehension, followed by critical thinking, while vocabulary emerged as the weakest area of reading competence. This suggests that although students are generally capable of understanding and interpreting texts, limitations in vocabulary knowledge may hinder their ability to fully comprehend complex materials and engage in deeper critical analysis.

Difference in the Level of Reading Competence of Freshmen Maritime Students when Grouped According to Sex

The table 3 presents the difference in the level of reading competence of the freshmen maritime students when grouped according to sex. The table shows the results of the statistical analysis conducted to determine whether a significant difference exists in the reading competence levels between male and female respondents.

Table 3. Difference in the level of Reading Competence of Freshmen Maritime Students

When Grouped According to Sex.

Sex	n	Test Statistics (U)	P-value	Decision for Ho	Interpretation
Male	177	605.500	0.919	Failed to Reject Ho	Not Significant
Female	7				
Total	184				

The results reveal a Mann–Whitney U statistic of 605.500 with a p-value of 0.919. Since the obtained p-value is substantially higher than the 0.05 level of significance, the null hypothesis was not rejected. This indicates that there is no statistically significant difference in the measured variable between male and female respondents. Therefore, sex did not significantly influence the respondents' scores. The data suggest that regardless of sex, students entering the maritime program possess similar baseline linguistic and reading capabilities. This implies that instructional materials, reading interventions, and learning modules do not need to be tailored or differentiated by gender, as both groups demonstrate comparable levels of reading

comprehension. Despite the maritime field being predominantly male, the minority female cohort performed at a similarly competent level in reading. These findings highlight that proficiency in critical academic skills such as reading comprehension is gender-neutral.

The present findings are in consonance with those of Dew et al. (2021), who investigated gender-related performance differences among more than 10,000 students enrolled in introductory physics courses. Although the researchers observed some statistically significant differences in specific examinations, the effect sizes were generally small, leading them to conclude that gender was not a major determinant of academic performance. Likewise, the current study found that sex did not significantly influence students' reading comprehension scores, reinforcing the view that academic performance is more strongly influenced by factors other than gender.

The findings are also consistent with recent educational and technology adoption studies, which have reported that males and females generally exhibit comparable levels of engagement, acceptance, and performance when provided with equal learning opportunities and resources. Researchers attribute this pattern to increasing gender inclusivity, broader access to educational technologies, and the reduction of gender-related barriers in learning environments. Consequently, gender is no longer considered a strong predictor of academic performance or learner perception in many contemporary educational settings. The agreement between the present study and previous research strengthens the conclusion that reading comprehension abilities among first-year maritime students are not significantly affected by sex.

Difference in the Level of Reading Competence of Freshmen Maritime Students when Grouped According to High School of Origin

The table 4 on the next page presents the results of the test of difference in the level of reading competence of freshmen maritime students when grouped according to their high school of origin. Specifically, the respondents were categorized according to whether they graduated from public or private secondary schools.

Table 4. Difference in the level of Reading Competence of Freshmen Maritime Students

When Grouped According to High School of Origin.

High School of Origin	n	Test Statistic (U)	P-value	Decision for Ho	Interpretation
Private	69	3654.00	0.421	Failed to Reject Ho	Not Significant
Public	115				
Total	184				

The results reveal a test statistic value of 3654.00 and a p-value of 0.421, which is greater than the 0.05 level of significance. Therefore, the null hypothesis was not rejected, indicating that there is no statistically significant difference in the level of reading competence of freshmen maritime students when grouped according to high school of origin. This finding suggests that students who graduated from public and private high schools demonstrated comparable levels of reading competence upon entering maritime education.

The result implies that the type of high school attended did not significantly influence the students' reading competence. Despite the common assumption that private school graduates possess stronger reading skills because of greater access to educational resources, the findings indicate that both public and private school graduates exhibited relatively similar reading competencies.

The present findings are in consonance with the study of Mirasol (2024), who reported that students' reading performance is more strongly associated with the use of effective reading strategies, learner engagement, and critical reading practices than with the type of school attended. The study emphasized that reading competence develops through continuous exposure to reading tasks and strategic literacy instruction rather than institutional classification alone. The consistency between the two studies suggests that instructional quality and students' literacy experiences play a more influential role in reading competence than whether a student graduated from a public or private high school.

Similarly, the findings are in consonance with those of de Oliveira et al. (2024), who examined the reading processes of students from public and private schools and found that although differences existed in certain reading subskills, overall reading development was largely shaped by literacy experiences and instructional practices rather than school ownership. The authors further emphasized that variations in reading performance are more closely associated with teaching approaches, access to learning materials, and socioeconomic factors than with the public–private school distinction. This supports the present finding that high school of origin alone is not a significant determinant of students' reading competence.

However, the present findings are in disagreement with the study of Panaligan (2021), who reported that Grade 6 learners from private schools demonstrated stronger reading abilities in vocabulary and phonics than their public-school counterparts. The discrepancy may be attributed to differences in the participants, educational level, and context of the studies.

While Panaligan focused on elementary learners and specific components of reading, the present study examined freshmen maritime students whose reading competence may have become more comparable after years of secondary education and varied literacy experiences. These differences suggest that reading competence is dynamic and may be influenced by multiple factors beyond the type of high school attended.

Likewise, studies comparing reading achievement among elementary learners have shown higher reading proficiency among private school students. However, the absence of significant differences in the present study may indicate that such disparities diminish by the time students reach tertiary education, particularly among freshmen maritime students who have undergone similar admission requirements and educational experiences before entering college.

Overall, the findings support the conclusion that high school of origin is not a significant factor affecting the reading competence of freshmen maritime students, and that reading competence may be more strongly influenced by individual learning experiences, reading practices, and literacy exposure than by the type of school attended.

Difference in the Level of Reading Competence of Freshmen Maritime Students when Grouped According to Mothers' Educational Attainment

Table 5 below presents the level of reading competence of the respondents when grouped according to their mothers' educational attainment. It shows the differences in reading competence among freshmen maritime students whose mothers have varying educational backgrounds, ranging from elementary undergraduate to college graduate.

Table 5. Difference in the level of Reading Competence of Freshmen Maritime Students

When Grouped According to Parents Educational Attainment (Mother).

Mothers' Educational Attainment	n	Test Statistic (H)	P-value	Decision for Ho	Interpretation

Elementary Undergraduate	13	24.475	<.001	Reject Ho	Significant
Elementary Graduate	17				
High School Undergraduate	14				
High School Graduate	51				
College Undergraduate	28				
College Graduate	61				
Total	184				

Table 5 presents the difference in the level of reading competence of freshmen maritime students when grouped according to their mothers' educational attainment. The respondents were classified into six educational categories: elementary undergraduate (n = 13), elementary graduate (n = 17), high school undergraduate (n = 14), high school graduate (n = 51), college undergraduate (n = 28), and college graduate (n = 61), yielding a total of 184 respondents. Among these groups, the largest proportion of students had mothers who were college graduates (61 or 33.15%), followed by high school graduates (51 or 27.72%), while the smallest group consisted of students whose mothers were elementary undergraduates (13 or 7.07%).

The statistical analysis generated a test statistic of 24.475 with a p-value of < .001. Because the p-value is below the .05 level of significance, the null hypothesis (Ho) was rejected. Thus, there was a statistically significant difference in the level of reading competence of freshmen maritime students when grouped according to their mothers' educational attainment. The significant omnibus result warranted the subsequent pairwise comparisons.

One possible explanation for this finding is that reading competence is acquired through a cumulative process involving numerous educational and environmental influences throughout a learner's academic life. While mothers often serve as children's earliest teachers and literacy facilitators, students entering higher education have already experienced years of formal instruction, exposure to varied reading materials, teacher guidance, peer interaction, and independent learning opportunities. These accumulated educational experiences may lessen the influence of maternal educational attainment on students' current reading competence.

Furthermore, mothers with lower levels of formal education may still cultivate strong literacy practices within the home. They may encourage regular reading, monitor academic progress, provide emotional support, establish study routines, and motivate their children to value education. Conversely, mothers with higher educational attainment may not always have sufficient time to engage actively in literacy-related activities because of employment or other family responsibilities. Consequently, the quality of parental involvement rather than educational attainment itself may exert greater influence on students' literacy development.

In consonance with the present findings, Claes et al. (2024) reported that the home literacy environment influences students' reading comprehension indirectly through reading enjoyment, reading motivation, and reading frequency. Their study demonstrated that literacy-related experiences within the family such as shared reading, parental reading habits, and access to books serve as stronger predictors of reading performance than parents' educational attainment alone

Furthermore, Table 5.1 presents the pairwise comparison among the different categories of mothers' educational attainment to determine which specific groups exhibit significant differences in reading competence. The pairwise analysis provides a more detailed examination of the variations observed among the groups by identifying the educational attainment categories that significantly differ from one another.

Table 5.1. Pairwise Comparison Between Parents Educational Attainment (Mother).

Parents Educational Attainment (Mother)		Test-Statistics	P-value	Interpretation
Elementary Undergraduate	Elementary Graduate	36.853	0.060	Not Significant
	High School Undergrad	4.071	0.843	Not Significant
	High School Graduate	-19.843	0.230	Not Significant
	College Undergrad	-38.161	0.033	Significant
	College Graduate	-16.311	0.316	Not Significant
Elementary Graduate	High School Undergraduate	-32.782	0.088	Not Significant
	High School Graduate	-56.696	<.001	Significant
	College Undergraduate	-75.014	<.001	Significant
	College Graduate	-53.164	<.001	Significant
High School Undergraduate	High School Graduate	-23.915	0.136	Not Significant
	College Undergraduate	-42.232	0.015	Significant
	College Graduate	-20.383	0.196	Not Significant
High School Graduate	College Undergraduate	-18.318	0.143	Not Significant
	College Graduate	3.532	0.727	Not Significant
College Undergraduate	College Graduate	21.849	0.072	Not Significant

The data reveals the pairwise comparison of the level of reading competence of freshmen maritime students according to their mothers' educational attainment. The analysis was conducted following the significant overall difference observed in the omnibus test, allowing the identification of specific groups that differed significantly from one another.

The results show several statistically significant pairwise differences. Specifically, students whose mothers were College Undergraduates demonstrated significantly different reading competence levels compared with those whose mothers were Elementary Undergraduates ($p = 0.033$) and High School Undergraduates ($p = 0.015$). Likewise, significant differences were observed between students whose mothers were Elementary Graduates and those whose mothers were High School Graduates ($p < .001$), College Undergraduates ($p < .001$), and College Graduates ($p < .001$).

These findings indicate that students whose mothers attained higher educational levels generally exhibited better reading competence than those whose mothers had lower educational attainment. Mothers with higher educational backgrounds are more likely to engage in literacy-related activities, provide educational resources, model reading behaviors, and create home environments that encourage language and reading development. Such practices contribute to the acquisition of vocabulary, comprehension skills, critical thinking abilities, and positive attitudes toward reading, which are essential components of reading competence. The results are consistent with the study of Vázquez-Cano (2026), who found that parental educational attainment, particularly that of mothers, significantly influenced students' reading achievement. Their analysis of large-scale educational assessment data revealed that students whose mothers possessed higher educational qualifications consistently obtained better reading performance scores. The authors explained that highly educated mothers often provide stronger academic guidance and foster intellectually stimulating home environments that enhance literacy development. Similarly, Colin Dagohoy et al. (2025) reported that maternal education significantly affects reading achievement among learners. Students whose mothers attained secondary and tertiary education generally performed better in reading comprehension than those whose mothers had only elementary education.

Difference in the Level of Reading Competence of Freshmen Maritime Students when Grouped According to Fathers' Educational Attainment

The table 6 presents the level of reading competence of the respondents when grouped according to their fathers' educational attainment. It shows the differences in reading competence among freshmen maritime students whose fathers have varying educational backgrounds, ranging from elementary undergraduate to college graduate.

Table 6. Difference in the Level of Reading Competence of Freshmen Maritime Students

When Grouped According to Parents Educational Attainment (Father).

Fathers' Educational Attainment	n	Test Statistic (H)	P-value	Decision for Ho	Interpretation
Elementary Undergraduate	19	13.930	0.030	Reject Ho	Significant
Elementary Graduate	19				
High School Undergraduate	18				
High School Graduate	50				
College Undergraduate	28				
College Graduate	45				
Not Applicable	5				
Total	184				

Table 6 presents the difference in the level of reading competence of freshmen maritime students when grouped according to their fathers' educational attainment. A total of 184 respondents participated in the study and were categorized according to seven levels of paternal educational attainment: elementary undergraduate (n = 19), elementary graduate (n = 19), high school undergraduate (n = 18), high school graduate (n = 50), college undergraduate (n = 28), college graduate (n = 45), and not applicable (n = 5). The largest proportion of respondents came from families whose fathers were high school graduates (27.17%), followed by college graduates (24.46%), while the smallest group consisted of respondents who indicated "Not Applicable" (2.72%). The statistical analysis yielded a test statistic of 13.930 with a p-value of 0.030. Because the p-value is below the .05 level of significance, the null hypothesis (Ho) was rejected. Therefore, there was a statistically significant difference in the level of reading competence of freshmen maritime students when grouped according to their fathers' educational attainment. The significant omnibus result justified the subsequent pairwise comparisons.

This finding indicates that variations in fathers' educational attainment did not produce measurable differences in the reading competence of the respondents. Regardless of whether the father completed elementary school, secondary education, or college, students demonstrated relatively comparable levels of reading competence. The result suggests that paternal educational attainment alone may not be a determining factor influencing the reading competence of freshmen maritime students.

This finding is consistent with Bronfenbrenner's Ecological Systems Theory, which posits that student learning develops through the interaction of multiple environmental systems rather than a single family characteristic. Reading competence is influenced not only by parental educational attainment but also by school experiences, teacher effectiveness, peer relationships, home literacy practices, socioeconomic conditions, access to books, digital learning resources, and students' own motivation and reading behaviors. The present findings are in consonance with those of Claes et al. (2024), who found that the home literacy environment influences reading comprehension indirectly through students' reading motivation, reading enjoyment, and reading frequency. Their study indicates that literacy-related experiences at home are more influential than demographic characteristics such as parental educational attainment alone. The authors emphasized that the availability of books, parents' reading habits, and literacy interactions within the family contribute more substantially to reading development than parents' educational credentials themselves. This supports the present finding that fathers' educational attainment, by itself, is not a significant determinant of students' reading competence.

Likewise, the present findings are in consonance with the study of Alramamneh et al. (2023), who reported that parents' attitudes toward reading influence children's reading literacy primarily through early literacy activities conducted at home. Their findings demonstrated that parental educational attainment does not directly determine reading performance unless accompanied by meaningful literacy practices such as shared reading, storytelling, and language-rich interactions.

The agreement between the two studies highlights that the quality of literacy experiences within the home is more influential than the father's educational attainment alone. Overall, the findings suggest that father's educational attainment is not a significant determinant of the reading competence of freshmen maritime students. Reading competence appears to develop through a combination of educational experiences, literacy practices, learner motivation, school instruction, and access to learning opportunities rather than through parental educational attainment alone. Consequently, institutions should continue implementing inclusive literacy development programs that address the needs of all learners irrespective of their family educational background.

Furthermore, Table 5b.1 presents the pairwise comparison among the different categories of fathers' educational attainment to determine which specific groups exhibit significant differences in reading competence. The pairwise analysis provides a more detailed examination of the variations observed among the groups by identifying the educational attainment categories that significantly differ from one another.

Table 6.1 Pairwise Comparison Between Parents Educational Attainment (Father).

Parents Educational Attainment (Father)		Test-Statistics	P-value	Interpretation
Elementary Undergraduate	Elementary Graduate	4.0	0.817	Not Significant
	High School Undergrad	-20.684	0.237	Not Significant
	High School Graduate	-16.564	0.248	Not Significant
	College Undergrad	-31.648	0.045	Significant
	College Graduate	-39.251	0.007	Significant
	Not Applicable	-24.184	0.366	Not Significant
Elementary Graduate	High School Undergraduate	-24.684	0.158	Not Significant
	High School Graduate	-20.564	0.152	Not Significant
	College Undergraduate	-35.648	0.024	Significant
	College Graduate	-43.2510	0.003	Significant
	Not Applicable	-28.184	0.292	Not Significant
High School Undergraduate	High School Graduate	4.120	0.778	Not Significant
	College Undergraduate	-10.964	0.495	Not Significant
	College Graduate	-18.568	0.211	Not Significant
	Not applicable	-3.5	0.896	Not Significant
High School Graduate	College Undergraduate	-15.084	0.230	Not Significant
	College Graduate	-22.687	0.038	Significant
College Undergraduate	College Graduate	-7.602	0.553	Not Significant
	Not Applicable	7.464	0.773	Not Significant
College Graduate	Not Applicable	15.067	0.548	Not Significant

The data reveals the pairwise comparison results of the level of reading competence of freshmen maritime students when grouped according to their fathers' educational attainment. The analysis was conducted to determine which specific educational attainment groups differed significantly from one another following the significant overall test result.

The findings revealed several statistically significant differences among the educational attainment categories. Significant differences were observed between students whose fathers were Elementary Undergraduates and those whose fathers were College Undergraduates ($p = 0.045$) and College Graduates ($p = 0.007$). Similarly, significant differences were found between students whose fathers were Elementary Graduates and those whose fathers were College Undergraduates ($p = 0.024$) and College Graduates ($p = 0.003$). In addition, a

significant difference was identified between students whose fathers were High School Graduates and College Graduates ($p = 0.038$).

These results indicate that students whose fathers attained college-level education generally demonstrated higher levels of reading competence than those whose fathers had only elementary-level educational attainment. The significant differences are primarily evident between the lowest and highest educational attainment groups, suggesting that greater paternal educational attainment may contribute positively to the development of reading competence. According to Dagohoy et al. (2025), who found that parental educational attainment significantly influences students' reading achievement. Their analysis of international assessment data revealed that students whose parents attained higher levels of education consistently performed better in reading literacy assessments. The authors explained that educated parents are more likely to create intellectually stimulating home environments that promote literacy development. Rasulova (2024) reported that parental educational attainment significantly affects reading achievement. The study found that students whose fathers possessed higher educational qualifications demonstrated stronger reading comprehension and literacy skills. The author noted that highly educated fathers are generally more capable of supporting academic activities, monitoring educational progress, and fostering positive learning attitudes. Overall, Rasulova (2024) found that parental educational attainment significantly affects children's reading comprehension skills. The study reported that children whose parents possessed higher educational backgrounds achieved better reading outcomes because educated parents were more likely to engage in literacy-related activities, provide learning support, and cultivate positive reading behaviors at home.

Similarly, recent studies on home literacy environments further support these findings. Georgiou (2024) emphasized that parental educational background influences the quality of literacy interactions within the home. Parents with higher educational attainment tend to engage more frequently in reading-related activities, provide greater access to books and educational materials, and encourage intellectual discussions that enhance literacy development. Such experiences contribute significantly to students' reading competence and academic achievement.

Difference in the Level of Reading Competence of Freshmen Maritime Students when Grouped According to Mother's Employment Status

Table 7 presents the level of reading competence of the freshmen maritime students when grouped according to the employment status of their parents. Specifically, Table 7 shows the respondents' reading competence based on their mothers' employment status.

Table 7. Difference in the level of Reading Competence of Freshmen Maritime Students When Grouped According to Parents Employment Status (Mother).

Parents Employment Status (Mother)	n	Test Statistics (H2.678)	P-value	Decision for Ho	Interpretation
Employed	68		0.444	Failed to Reject Ho	Not Significant
Unemployed	96				
Self-Employed	18				
Not Applicable	2				
Total	184				

The data reveal that the reading competence of freshmen maritime students did not significantly differ when grouped according to the mother's employment status. The computed test statistic, $H = 2.678$, with a p-value

of 0.444, was greater than the 0.05 level of significance. Therefore, the null hypothesis was not rejected. This means that whether the students' mothers are employed, unemployed, self-employed, or not applicable, their level of reading competence appears to be statistically similar.

This implies that the professional or employment status of a student's mother does not significantly impact or differentiate the student's reading competence upon entering the maritime program. Academic literacy skills like reading remain statistically uniform across these different home environments. At the college freshman level, reading competence is often the cumulative result of prior primary and secondary education, personal reading habits, and independent study. The data suggests that whether a mother is working full-time, managing a business, or staying at home, it does not directly hinder or uniquely accelerate a university student's established literacy levels.

The present findings are in consonance with those of Li et al. (2025), who found that socioeconomic status influences children's reading abilities indirectly through the home learning environment. Their study suggests that the educational support families provide, including access to reading materials and literacy-rich experiences, has a greater impact on reading development than parental employment status itself. This supports the present finding that a mother's occupation alone is not a significant determinant of students' reading competence.

Similarly, the findings are in consonance with the study of Çalışkan and Ulaş (2022), who emphasized that parent-involved reading activities positively influence students' reading comprehension, reading motivation, and attitudes toward reading. Their research indicates that active parental engagement and reading support are more important than whether a mother is employed or unemployed. This agreement reinforces the conclusion that the quality of parental involvement, rather than employment status, contributes more substantially to students' literacy development.

However, the present findings are in disagreement with the study of Rasulova (2024), who reported that parental education and occupational status were significantly associated with children's reading comprehension. The discrepancy may be attributed to differences in the participants and research contexts. Rasulova's study focused on younger learners, whose reading development is more directly influenced by family socioeconomic conditions and parental occupations. In contrast, the present study involved freshmen maritime students whose reading competence has been shaped by years of formal schooling, accumulated literacy experiences, and independent learning. Consequently, the influence of maternal occupation may diminish as students progress to higher levels of education and become more autonomous learners.

Difference in the Level of Reading Competence of Freshmen Maritime Students when Grouped According to Father's Employment Status

Tables 8 below presents the level of reading competence of the freshmen maritime students when grouped according to the employment status of their parents. Specifically, Table 8 shows the respondents' reading competence based on their fathers' employment status.

Table 8. Difference in the level of Reading Competence of Freshmen Maritime Students When Grouped According to Parents Employment Status (Father).

Parents Employment Status (Father)	n	Test Statistic (H)	P-value	Decision for Ho	Interpretation
Employed	111	1.195	0.754	Failed to Reject Ho	Not Significant
Unemployed	15				
Self-Employed	47				

Not Applicable	11				
Total	184				

The data reveals the difference in the level of reading competence of freshmen maritime students when grouped according to their fathers' employment status. The respondents were categorized as employed, unemployed, self-employed, and not applicable. The statistical analysis yielded a test statistic value of 1.195 and a p-value of 0.754. This means that a father's employment status does not serve as a determining factor in a freshman maritime student's reading competence. Academic literacy profiles remain statistically equivalent across different paternal socio-economic backgrounds.

According to Rasulova (2024) found that while parental occupation contributes to children's academic outcomes, parental educational attainment and literacy support have a stronger influence on reading achievement. The study reported that occupation alone does not fully explain differences in reading comprehension because its effects are often mediated by educational resources, parental involvement, and socioeconomic conditions

However, a study by B. Segura and M. Alcuizar (2026) emphasized how parental occupation in higher-income sectors correlates with increased academic resources and cognitive stimulation at home, both of which enhance reading proficiency. Conversely, lower-income occupations may limit these resources, creating stressors that reduce a child's focus on learning. Additionally, parents with higher educational attainment and stable occupations are often better positioned to invest in supplementary educational resources, such as books, educational games, and digital literacy tools. These resources provide children with greater opportunities to develop their reading skills and foster early literacy. Research suggests that children from more affluent and educated families generally have better access to educational materials, which contributes significantly to their reading proficiency. Furthermore, parents who regularly read to their children provide essential cognitive and emotional support, strengthening their word recognition, vocabulary development, and overall literacy skills. According to a study, children tend to identify words more quickly and accurately when parents engage in reading activities with them and provide praise and reinforcement. This is due to the fact that youngsters feel emotionally supported in a system that validates their efforts, which increases their self-assurance and perseverance in learning. The family, as a system, shapes a child's reading behaviors through consistent interaction and positive reinforcement (B. Segura & M. Alcuizar, 2026).

CONCLUSION

Based on the findings, freshmen maritime students generally demonstrated a high level of reading competence, with comprehension as the strongest area, followed by critical thinking, while vocabulary obtained the lowest mean score. No statistically significant differences were found when students were grouped according to sex, high school of origin, mothers' employment status, and fathers' employment status. In contrast, statistically significant differences were found according to both mothers' educational attainment ($p < .001$) and fathers' educational attainment ($p = .030$), with the reported pairwise comparisons identifying specific educational-attainment groups that differed. These results indicate that demographic variables did not uniformly differentiate reading competence, while parental educational attainment showed significant group differences in the present sample. A structured Reading Enhancement Program is therefore recommended, with priority given to vocabulary development and continued reinforcement of comprehension and critical reading skills using maritime-context materials.

Proposed Reading Enhancement Program. The program should prioritize vocabulary because it obtained the lowest mean among the three assessed areas. Activities should be contextualized to maritime study and may include technical maritime vocabulary development, vocabulary-in-context exercises using shipboard and safety passages, analysis of terminology encountered in manuals and operational texts, structured word-learning strategies, comprehension exercises based on maritime reading materials, and critical-reading tasks

requiring inference and evaluation. Implementation should include a baseline assessment, scheduled intervention sessions, formative vocabulary checks, and a post-assessment using measures aligned with the validated reading instrument. Program targets and success criteria should be finalized after the instrument's sub-score structure and reliability evidence are documented.

Citation verification note: All references, particularly 2025–2026 publications and reading selections, should be checked against the original journal, publisher, DOI, or institutional record before submission. The present revision does not invent or substitute bibliographic details that are not supported by the manuscript.

REFERENCES

1. Alramamneh, A., Al-Zboon, E., & Ahmad, J. (2023). Parents' attitudes toward reading and their relationship with children's reading literacy. *Journal of Family Studies*, 29(2), 456–472.
2. Billao, R. G. (2026). Reading comprehension and academic performance among English learners. *International Journal of Education and Literacy Studies*, 14(1), 78–89.
3. Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.
4. Buckley, D. (2024). Aisle three [Reading selection]. *Educational Reading Materials*.
5. Buckley, D. (2025). A fear of kissing [Reading selection]. *Educational Reading Materials*.
6. Çalışkan, N., & Ulaş, A. H. (2022). The effect of parent-involved reading activities on students' reading comprehension, motivation, and attitudes. *Education and Science*, 47(211), 1–21.
7. Casinillo, L. F. (2020). Vocabulary knowledge and reading comprehension among learners in Leyte. *Asian Journal of Multidisciplinary Studies*, 8(11), 34–41.
8. Chamba, M., & Ramirez-Avila, M. (2021). Reading competence as a multidimensional skill: Strategic comprehension and vocabulary development. *Journal of Language and Linguistic Studies*, 17(3), 1425–1439.
9. Claes, E., Van den Broeck, W., & Verschaffel, L. (2024). The role of the home literacy environment in reading comprehension: Indirect effects through reading enjoyment and motivation. *Reading and Writing*, 37(4), 891–915.
10. Colin Dagohoy, R. M., Santos, L. P., & Torres, J. A. (2025). Maternal education and reading achievement among Filipino learners. *Philippine Educational Research Journal*, 13(1), 45–62.
11. Blume, A. P., Braasch, J. L. G., & Hacker, D. J. (2021). Reading competence: Decoding, comprehension, and strategic application. *Educational Psychology Review*, 33(2), 567–589.
12. de Oliveira, K. L., Santos, A. A. A., & Primi, R. (2024). Reading processes of students from public and private schools: A comparative analysis. *Psicologia: Teoria e Pesquisa*, 40, e4025.
13. Dew, K. M., Galassi, J. P., & Galassi, M. D. (2021). Gender differences in academic performance among physics students. *Journal of Educational Research*, 114(3), 289–301.
14. Dixon, P., & Oakhill, J. (2024). Strengthening reading comprehension through prediction, questioning, and vocabulary instruction. *Reading Research Quarterly*, 59(2), 234–256.
15. Georgiou, G. K. (2024). Parental educational background and home literacy environments: Effects on children's reading development. *Journal of Research in Reading*, 47(1), 112–131.
16. Juwairiah, O., Santos, R. M., & dela Cruz, A. P. (2024). Reading proficiency among Filipino college students: A national assessment. *Asian Journal of Education and Learning*, 12(2), 67–82.
17. Li, H., Zhang, Y., & Liu, X. (2025). Socioeconomic status and children's reading abilities: The mediating role of home learning environment. *Early Childhood Research Quarterly*, 60, 123–135.
18. Liswaniso, S. (2024). Vocabulary knowledge and reading comprehension: Essential components of literacy development. *Journal of Language Teaching and Research*, 15(1), 89–102.
19. McCombes, S. (2023). *Descriptive research design: Definition, methods, and examples*. Scribbr Research Methodology Guide.
20. Mirasol, A. T. (2024). Reading strategies and performance: Beyond institutional classification. *Philippine Journal of Linguistics*, 55(1), 78–94.
21. National Assessment of Educational Progress. (n.d.). Reading proficiency and academic success. U.S. Department of Education.

22. Organisation for Economic Co-operation and Development (OECD). (2023). PISA 2022 results: Philippines country report. OECD Publishing.
23. Orellana, P., Baldwin, P., & Waring, S. (2024). Reading comprehension as a key academic skill: Contributions to learning performance and educational success. *Reading Psychology*, 45(3), 312–338.
24. Paige, D. D., Smith, G. S., & Rasinski, T. V. (2024). Critical thinking and reading comprehension: Beyond basic linguistic skills. *Journal of Educational Psychology*, 116(2), 234–251.
25. Panaligan, E. R. (2021). Reading abilities in vocabulary and phonics among Grade 6 learners from public and private schools. *Asian Journal of Education and E-Learning*, 9(4), 112–125.
26. Ramadhani, R., Huda, S., & Umam, R. (2023). The relationship between critical thinking skills and reading comprehension among students. *International Journal of Instruction*, 16(1), 263–278.
27. Rasulova, Z. D. (2024). The impact of parental education and occupation on children's reading comprehension skills. *International Journal of Early Childhood Special Education*, 16(1), 45–59.
28. Romina M. Adora, Cruz, L. T., & Valdez, P. N. (2024). Reading abilities and academic achievement: Implications for individual and societal progress. *Philippine Educational Review*, 18(2), 89–107.
29. Rumelhart, D. E. (1980). Schemata: The building blocks of cognition. In R. J. Spiro, B. C. Bruce, & W. F. Brewer (Eds.), *Theoretical issues in reading comprehension* (pp. 33–58). Lawrence Erlbaum Associates.
30. Segura, B., & Alcuizar, M. (2026). Parental occupation, socioeconomic status, and children's reading proficiency: A family systems perspective. *Journal of Family and Economic Issues*, 47(1), 156–173.
31. Vázquez-Cano, E. (2026). Parental educational attainment and students' reading achievement: Evidence from large-scale assessments. *Educational Research Review*, 38, 100485.
32. Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). Harper and Row.