

Reading Comprehension, Critical Thinking Skills and Academic Performance of Students: Basis for Educational Reform

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ABSTRACT

This study examined the relationship between reading comprehension, critical thinking skills, and academic performance among students at Valladolid National High School–Ayungon Annex, District of Valladolid. Specifically, it determined the students' levels of reading comprehension and critical thinking skills and investigated whether these variables were significantly associated with academic performance. The study employed a quantitative, descriptive-correlational research design involving 167 student respondents. Standardized assessment instruments were used to measure reading comprehension and critical thinking skills, while students' academic performance was determined through their SF9 (Report Card) grades. Descriptive statistics, including the mean, were utilized to determine the levels of the variables, whereas Spearman Rank-Order Correlation was applied to examine the relationships among them. The findings revealed that the respondents generally demonstrated an instructional level of reading comprehension and a moderate level of critical thinking skills across the dimensions of analyzing, evaluating, creating, remembering, understanding, and applying. Their academic performance was classified as very satisfactory. Furthermore, the results showed a statistically significant positive relationship between reading comprehension and academic performance, indicating that students with stronger comprehension skills tended to achieve higher academic outcomes. Similarly, critical thinking skills were found to have a significant positive relationship with academic performance, suggesting that students with stronger reasoning and analytical abilities performed better academically. The findings highlight the critical role of developing reading comprehension and critical thinking skills in promoting students' academic success. It is therefore recommended that schools implement targeted literacy and higher-order thinking interventions, integrate critical thinking activities across the curriculum, and strengthen instructional strategies that foster comprehension and analytical reasoning to further enhance learners' academic achievement.

Keywords: Reading Comprehension Critical Thinking Skills Academic Performance Descriptive- Correlational Research Literacy Development Secondary Students

INTRODUCTION

Reading comprehension is a fundamental academic skill that enables learners to interpret textual information, construct meaning, and apply knowledge across learning contexts (Haswani et al., 2024). Students with stronger reading comprehension are better positioned to understand complex information, solve problems, think critically, and acquire new knowledge independently (Espiel & Carretero, 2022). Because reading is integral to learning across subject areas, difficulties in comprehension may extend beyond language-related tasks and affect students' overall academic performance.

The reading performance of Filipino learners has remained a significant educational concern. Results from the Programme for International Student Assessment (PISA) 2018 placed the Philippines among the lowest-performing participating education systems in reading, with a mean reading score of 340 (OECD, 2019). This result raised concerns regarding Filipino students' ability to comprehend and use written information effectively. Manlapig (2020) associated persistent learning difficulties with an overemphasis on rote memorization, in which learners may acquire definitions, concepts, and procedures without sufficiently developing the ability to interpret, analyze, and apply information. More recent PISA results showed a modest increase in the Philippines'

reading score to 347 in PISA 2022, indicating some improvement while also demonstrating that substantial challenges in reading literacy remain (OECD, 2023). These findings underscore the continuing need to examine factors associated with students' reading comprehension and academic outcomes.

Reading comprehension is closely connected with higher-order cognitive processes, particularly critical thinking. Critical thinking involves the active examination of information through processes such as analysis, evaluation, interpretation, and reasoned judgment. These skills do not develop automatically; rather, they require explicit instruction, meaningful learning experiences, and sustained practice (Hammond et al., 2020; Ghanizadeh et al., 2020; Trinidad et al., 2020). In reading contexts, critical thinking enables learners to move beyond recalling information by questioning claims, evaluating evidence, making inferences, and constructing reasoned interpretations. Consequently, the development of critical thinking may be particularly important in helping learners engage more deeply with texts and apply information to academic tasks.

Schema Theory provides a useful theoretical basis for understanding this process. Originally advanced by Bartlett (1932), the theory proposes that comprehension involves an interaction between a reader's existing knowledge structures and new information encountered in a text. Readers do not process textual information in isolation; instead, they interpret new information by connecting it with prior experiences and knowledge. In educational settings, activating and developing appropriate schemata can support learners' comprehension, particularly when they encounter unfamiliar concepts or implicit information (Luo, 2018; Bruen, 2020; Qin, 2020). From this perspective, reading comprehension involves an active cognitive process in which learners construct meaning rather than merely receive information.

Recent empirical research further demonstrates the importance of examining reading and critical-thinking processes among secondary school learners. Mirasol (2024), in a study of 628 junior high school students from public and private schools in the Philippines, found that students reported a high level of awareness of their critical reading strategies, yet their actual reading-test performance was considerably weaker. The findings revealed a disconnect between students' perceived use of critical reading strategies and their demonstrated reading performance, particularly in higher-order processes such as synthesis and evaluation. The study consequently emphasized the need for explicit instruction in critical reading strategies.

The relationship between critical thinking and reading achievement has likewise been examined empirically. Maulid et al. (2023), using a correlational design with Grade 11 students, found a significant positive relationship between critical thinking and critical reading comprehension achievement. Their findings suggest that students with stronger critical-thinking skills tend to demonstrate better performance in critical reading. However, the study focused specifically on critical reading achievement and did not examine students' broader academic performance.

Evidence from the Philippine context also indicates the relevance of critical thinking to academic achievement. Farillon (2022) investigated the relationships among scientific reasoning, critical thinking, and Science performance among senior high school students at Tapaz National High School in Capiz. Using a quantitative correlational design, the study examined critical thinking alongside academic performance in Science, providing evidence that higher-order cognitive skills are relevant to students' subject-area achievement. However, its focus was limited to Science performance and did not include reading comprehension as a related construct.

Research examining reading comprehension and academic performance has also produced evidence that warrants further investigation. A recent study by Dela Cruz et al. examined the relationship between reading comprehension and academic performance among Grade 12 students in a Philippine public-school context. The study reinforces the relevance of reading comprehension to academic achievement at the senior high school level. However, because it focused primarily on the relationship between reading comprehension and academic performance, it did not simultaneously examine the role of critical thinking or its specific cognitive dimensions.

Taken together, these studies demonstrate that reading comprehension, critical thinking, and academic performance are important and potentially interconnected dimensions of student learning. Nevertheless, the existing evidence remains fragmented. Some studies have examined reading comprehension in relation to academic performance, others have investigated critical thinking in relation to reading achievement, while still

others have examined critical thinking in relation to subject-specific academic performance. Comparatively less attention has been given to examining reading comprehension, critical thinking, and academic performance within a single empirical framework, particularly among students in a Philippine public secondary-school setting. Moreover, limited evidence is available concerning how specific dimensions of critical thinking—analyzing, evaluating, creating, remembering, understanding, and applying—are associated with academic performance alongside students' reading comprehension levels.

This gap is particularly relevant in local school contexts where students' literacy experiences, instructional opportunities, and engagement with higher-order thinking may differ from those represented in larger national or international assessments. Examining these variables within a specific school population can therefore provide contextualized evidence that may not be apparent in broader datasets. Such evidence is important for determining whether students' reading comprehension and critical-thinking competencies are associated with their academic achievement and for identifying areas that may warrant instructional attention.

The need for the present investigation is also informed by the researcher's professional observations as an English teacher. During classroom activities involving literary and other assigned texts, some learners demonstrated difficulty responding to comprehension questions and explaining meanings derived from their reading. Some appeared to rely primarily on surface-level information rather than actively constructing, evaluating, and applying meaning. Although these classroom observations cannot establish relationships among the variables, they provided a practical context for investigating whether differences in reading comprehension and critical thinking are associated with differences in academic performance.

The present study therefore examined the relationship between reading comprehension, critical thinking skills, and academic performance among students of Valladolid National High School–Ayungon Annex, District of Valladolid, Division of Negros Occidental, during School Year 2024–2025. Specifically, the study determined students' reading comprehension levels; assessed their overall critical thinking skills and the dimensions of analyzing, evaluating, creating, remembering, understanding, and applying; determined their academic performance; and examined the relationships between reading comprehension and academic performance and between the identified dimensions of critical thinking and academic performance.

The study is expected to contribute empirical evidence that may support educational decision-making and instructional planning. Its findings may assist teachers in designing learning experiences that strengthen reading comprehension and critical thinking, while school leaders and education program supervisors may use the evidence in planning literacy and cognitive-skill development initiatives. The findings may also provide students and parents with greater awareness of the importance of these competencies to academic achievement and serve as a reference for researchers undertaking related studies in other educational contexts.

The study was delimited to students enrolled at Valladolid National High School–Ayungon Annex during School Year 2024–2025. Reading comprehension was examined in terms of frustration, instructional, and independent levels, while critical thinking was examined overall and across six dimensions: analyzing, evaluating, creating, remembering, understanding, and applying. Academic performance was examined based on the students' recorded academic achievement. Because the study focused on students from a single school, the findings should be interpreted within the context of the participating population and should not be generalized to all secondary school learners without consideration of differences in educational settings.

REVIEW OF RELATED LITERATURE AND STUDIES

Reading Comprehension

Reading comprehension is a multidimensional cognitive process through which readers construct meaning by integrating textual information with linguistic knowledge, prior knowledge, inferential processes, and metacognitive strategies. Contemporary research increasingly treats comprehension not simply as the ability to decode words but as an active process requiring readers to identify relationships among ideas, generate inferences, evaluate information, and integrate new knowledge with existing knowledge. This view is

particularly important in secondary education, where students are expected to comprehend increasingly complex informational, literary, and discipline-specific texts.

Recent empirical evidence reinforces the importance of linguistic and cognitive resources in comprehension. A three-year longitudinal study of bilingual learners found that vocabulary and word-reading skills were significantly associated with subsequent reading comprehension, demonstrating that lexical knowledge remains an important foundation for constructing meaning from texts (Zhang et al., 2023). Similarly, research on self-regulated learning has shown that cognitive and metacognitive strategies are directly associated with both critical thinking and reading comprehension, suggesting that effective readers actively monitor and regulate their comprehension rather than passively process textual information (Bai & Wang, 2023). These findings support the view that reading comprehension develops through the interaction of linguistic knowledge and higher-order cognitive processes.

The role of strategic and metacognitive reading is particularly relevant among secondary school learners. Mirasol (2024), in a large Philippine study involving 628 junior high school students from public and private schools, found that students demonstrated high awareness of critical reading strategies, but the study specifically examined whether such awareness translated into actual performance across different cognitive levels. The study's focus on the distinction between strategy awareness and demonstrated reading performance is important because knowing a strategy does not necessarily mean that students can effectively apply it while reading. This distinction strengthens the argument that comprehension should be assessed through actual performance rather than through students' reported awareness alone.

Philippine evidence also demonstrates continuing difficulties in reading comprehension. Misanes and Pascual (2023), using the Philippine Informal Reading Inventory (Phil-IRI), examined Grade 8 students and documented concerns regarding reading comprehension following the disruptions associated with the pandemic. Their study illustrates the continuing relevance of school-based assessment in identifying learners who require targeted reading support. Similarly, Augusto (2021) reported that 43% of Grade 4–6 learners in a Philippine laboratory school demonstrated an unsatisfactory level of Filipino reading comprehension, with unfamiliarity with the language identified as an important difficulty. These findings indicate that comprehension difficulties may emerge from the interaction of language proficiency, vocabulary, background knowledge, and the demands of the reading material.

Recent Philippine research has further demonstrated that reading comprehension difficulties extend across educational contexts. Dela Rosa and Paragas (2024), for example, assessed Grade 6 learners across phonological awareness, phonics, decoding, word identification, fluency, vocabulary, and comprehension. Their investigation illustrates that comprehension is connected to a broader network of foundational and language-related competencies rather than functioning as an isolated skill. Rivera (2024) likewise examined determinants of reading comprehension among junior high school learners enrolled in the Alternative Learning System and used Phil-IRI to assess their comprehension levels. More recently, Philippine research involving Grade 10 learners has continued to report concerns regarding reading comprehension and its relationship with reading fluency and academic achievement, indicating that literacy difficulties remain relevant even beyond the elementary grades.

The Philippine context is particularly significant given the country's performance in international assessments. The Philippines obtained a reading score of 340 in PISA 2018, substantially below the OECD average, while the country's PISA 2022 reading score increased only slightly to 347 (OECD, 2019, 2023). These results provide a broad national indicator of the continuing challenges in reading literacy. However, international assessment results alone cannot explain how reading difficulties manifest within individual schools and learner populations. School-level studies are therefore necessary to identify the actual comprehension levels and learning needs of Filipino students.

Importantly, recent research also demonstrates the relationship between reading comprehension and academic performance. Anto and Ventura-Escote (2023) examined Grade 6 learners in the Philippines and investigated literal, inferential, and evaluative comprehension in relation to academic performance in English, Science, and Mathematics. Galang et al. (2023) likewise reported a positive relationship between reading comprehension and academic performance in Mathematics among college students, demonstrating that comprehension is relevant

even in subjects that are not conventionally categorized as language-based. In a 2024 Philippine study, Adora et al. examined reading comprehension and academic performance in English among 289 Grade 7 students, further reinforcing the need to consider comprehension as a contributor to broader school achievement.

The evidence therefore suggests that reading comprehension should be understood as a complex competency involving linguistic knowledge, strategic processing, metacognition, and active construction of meaning. It is also increasingly clear that comprehension has implications beyond language subjects because students encounter written explanations, instructions, problems, and assessment materials across the curriculum. Nevertheless, the strength of the relationship between comprehension and academic performance may vary according to grade level, subject area, learner characteristics, and educational context. This variability justifies continued investigation of reading comprehension within specific Philippine public-school populations.

Critical Thinking Skills

Critical thinking is generally conceptualized as purposeful, reflective, and evidence-based thinking through which learners analyze information, evaluate claims, interpret evidence, make inferences, explain reasoning, and regulate their own thinking. Contemporary educational research increasingly positions critical thinking as a transferable competency that allows learners to respond effectively to complex academic and real-world problems. Rather than simply possessing knowledge, critically thinking learners are expected to determine how information should be interpreted, whether evidence is credible, and what conclusions can reasonably be drawn from available information.

Recent empirical research supports the importance of critical thinking in academic development. A large-scale study of primary learners found that academic performance was significantly associated with critical-thinking skills, with cross-lagged analyses suggesting a directional relationship from academic performance to critical-thinking skills (2023). This finding is important because it indicates that the relationship between critical thinking and achievement may be reciprocal or developmentally complex rather than simply a one-way effect of critical thinking on grades. Similarly, research involving university students found that critical thinking was strongly related to academic performance and could serve as an important predictor of achievement, although the authors also emphasized limitations concerning the interpretation of critical-thinking measures as indicators of academic performance (2023).

In the Philippine setting, empirical evidence confirms that critical thinking remains an important but unevenly developed learner competency. Lansangan and Orleans (2024), in a study involving 300 Filipino junior high school students, examined students' critical-thinking profiles in the context of science laboratory learning. The study emphasized the need for instructional environments that require learners to select appropriate information, evaluate its integrity, and formulate sound decisions. These processes correspond closely with the higher-order demands expected of secondary learners and demonstrate that critical thinking is particularly relevant when students engage with evidence-rich academic tasks.

Page and Futalan (2024) likewise investigated critical-thinking traits among 130 students in private Catholic schools in Siquijor Province. Their findings indicated high levels of several critical-thinking dispositions, including truth-seeking, open-mindedness, analyticity, systematicity, self-confidence, inquisitiveness, and cognitive maturity. These findings are significant because critical thinking involves not only cognitive skills but also dispositions that influence whether students are willing to question assumptions, examine evidence, and reconsider conclusions.

Evidence from Philippine senior high school settings also demonstrates the relationship between critical thinking and other cognitive outcomes. Pamaos et al. (2024), using a correlational design with 274 senior high school students in Davao de Oro, found a significant relationship between critical-thinking skills and decision-making. Their results indicate that critical thinking has practical implications beyond academic examinations because systematic analysis and evaluation can support students' ability to make reasoned decisions. Bual (2024) similarly reported that critical thinking and problem-solving were among the comparatively lower-rated dimensions of 21st-century skills among senior high school students in a Philippine Catholic school, suggesting that these competencies may require sustained instructional attention.

Instructional environment is another important consideration. Critical thinking is unlikely to develop fully when students are limited to memorization and reproduction of information. Empirical studies have shown that inquiry, problem solving, discussion, evidence analysis, and reflective activities can provide opportunities for students to practice higher-order thinking. For example, Diongco et al. (2022) investigated harmonized learning activities in Chemistry among 150 junior high school students in public schools in Laguna and examined their effects on both academic performance and critical-thinking skills. Likewise, research on instructional exposure among Philippine senior high school students found that learners were exposed to activities involving prediction, information gathering, organization of information, conclusion drawing, judgment, and justification, although opportunities for problem posing and metacognitive reflection were comparatively limited (Iringan, 2021).

The relationship between critical thinking and reading is particularly relevant to the present study. Reading increasingly requires learners to evaluate claims, identify assumptions, distinguish evidence from opinion, infer unstated meanings, and integrate information across a text. A recent intervention study found that critical-thinking instruction significantly influenced both critical thinking and reading comprehension among English language learners, providing empirical support for the interconnected nature of the two competencies (Bakhtiari Moghadam et al., 2023). Similarly, Ramadhani et al. (2023) reported a significant positive correlation between critical thinking and reading comprehension among university students, indicating that stronger critical-thinking ability was associated with stronger comprehension performance.

Mirasol's (2024) Philippine study provides additional contextual support because its investigation of junior high school students explicitly examined reading performance according to cognitive processes such as knowledge, application, analysis, synthesis, and evaluation. Taken together, these studies suggest that reading comprehension and critical thinking should not be treated as completely independent competencies. Rather, comprehension provides access to information while critical thinking allows learners to interrogate, evaluate, and use that information.

For the present study, critical thinking is examined through six dimensions: analyzing, evaluating, creating, remembering, understanding, and applying. These dimensions correspond to increasingly complex forms of cognitive engagement. Remembering involves retrieving relevant knowledge, understanding involves interpreting meaning, applying involves using knowledge in a situation, analyzing involves examining relationships among components, evaluating involves making judgments based on criteria and evidence, and creating involves generating or organizing ideas into a new product or solution. Examining these dimensions separately is useful because a composite critical-thinking score may conceal differences in students' cognitive strengths and weaknesses. This is especially relevant in the Philippine context, where recent empirical studies suggest that learners may demonstrate stronger performance in some cognitive processes than in others.

Academic Performance

Academic performance refers to the degree to which learners achieve expected educational outcomes, commonly reflected through grades, examination results, competency measures, and other indicators of school achievement. Although academic performance is frequently represented through a single grade or mean score, it is better understood as a multidimensional outcome influenced by cognitive, motivational, behavioral, instructional, and contextual factors.

Recent empirical research continues to demonstrate the importance of cognitive competencies in academic achievement. Clinton-Lisell et al. (2022), in a meta-analysis involving 26 studies and 25,090 students, found a significant association between performance on reading comprehension assessments and college grades ($r = .29$). Although the effect was modest, the finding provides strong quantitative evidence that reading comprehension contributes meaningfully to academic achievement. The finding is particularly relevant because academic learning requires students to process written instructions, explanations, assessment questions, and disciplinary texts.

Philippine studies similarly demonstrate that reading comprehension may be associated with academic outcomes. Anto and Ventura-Escote (2023) examined Grade 6 learners and investigated the relationship between comprehension difficulties and academic performance in English, Science, and Mathematics. Galang et al.

(2023) found a positive relationship between reading comprehension and Mathematics performance among Filipino college students. Adora et al. (2024) also investigated reading comprehension and English academic performance among Grade 7 learners, demonstrating the continuing relevance of literacy skills to school achievement. More recent Philippine research has extended this line of inquiry to science, examining the relationship between reading comprehension difficulties and science academic performance among junior high school students.

These findings support the argument that academic performance is partly dependent on students' ability to access and process information. Reading comprehension becomes particularly important as students progress through secondary school because academic tasks become increasingly dependent on informational texts, abstract concepts, written explanations, and complex assessment questions. A learner may therefore possess adequate content knowledge but still experience academic difficulty when the learner cannot efficiently comprehend the language through which that knowledge is presented.

Critical thinking represents another cognitive competency with potential implications for academic performance. Contemporary academic tasks increasingly require learners to analyze information, evaluate evidence, solve unfamiliar problems, and justify conclusions. Empirical evidence supports this relationship. A 2023 study examining critical thinking and academic performance among university students found a strong relationship between critical-thinking measures and academic achievement. Another multi-institutional study found that critical thinking, together with noncognitive competencies such as self-management and academic skills, contributed to the prediction of undergraduate academic performance even after considering traditional academic indicators.

Philippine evidence also points in the same direction. Farillon (2022), in a correlational study of senior high school students in Capiz, investigated scientific reasoning, critical thinking, and Science performance and established relationships among these cognitive and academic variables. Diongeo et al. (2022) likewise examined critical thinking and academic performance following the use of harmonized learning activities in Chemistry among junior high school students in Laguna. Cahulugan et al. (2024) further examined 21st-century skills and academic performance among senior high school learners in Bohol, reinforcing the importance of competencies such as critical thinking, collaboration, and information literacy within academic achievement.

Nevertheless, academic performance should not be reduced to cognitive ability alone. Learner motivation, self-regulation, instructional quality, family conditions, socioeconomic circumstances, peer relationships, and school resources can all influence achievement. Recent research on critical thinking and academic performance, for example, indicates that family and academic factors may interact in complex ways in explaining cognitive development and achievement. Therefore, relationships identified between reading comprehension, critical thinking, and academic performance should be interpreted as associations within a broader educational system rather than as evidence that a single cognitive skill determines students' grades.

For the present study, academic performance is represented by students' school records, providing an outcome measure that reflects their actual academic achievement within the school context. Focusing on reading comprehension and critical thinking allows the study to examine two cognitive competencies that are directly involved in processing academic information, while recognizing that academic performance itself is influenced by multiple factors.

Critical Thinking and Academic Performance

The relationship between critical thinking and academic performance has received increasing empirical attention because contemporary education requires students to demonstrate more than factual recall. Academic achievement often depends on learners' ability to interpret information, apply concepts, analyze relationships, evaluate evidence, solve problems, and construct defensible responses. Critical thinking can therefore be viewed as one of the cognitive resources that students draw upon when completing academically demanding tasks.

International evidence provides substantial support for this relationship. A multi-institutional study of undergraduate students found that critical thinking predicted academic performance alongside other academic

and noncognitive competencies, suggesting that critical thinking contributes information about achievement beyond traditional indicators (2023). Similarly, research published in *Sustainability* demonstrated a strong relationship between critical-thinking measurements and academic grades and examined critical thinking as a potential contributor to academic success. These studies reinforce the proposition that critical thinking is not merely an educational ideal but a measurable competency associated with actual academic outcomes.

Evidence from younger learners further complicates but strengthens this relationship. Research published in *Thinking Skills and Creativity* found that academic performance was a major explanatory factor for critical-thinking skills among primary students, while cross-lagged analyses identified a directional association from academic performance to critical-thinking skills. This finding is theoretically important because it cautions against assuming that critical thinking simply causes higher grades. Instead, academic learning itself may provide opportunities for students to develop the knowledge and cognitive resources necessary for more sophisticated critical thinking.

Philippine research provides additional support. Farillon (2022) found significant relationships involving scientific reasoning, critical thinking, and Science performance among Filipino senior high school students. Diongco et al. (2022) similarly examined critical-thinking skills and academic performance among junior high school students exposed to harmonized Chemistry learning activities. Pamaos et al. (2024) found that critical thinking was significantly related to decision-making among 274 Filipino senior high school students, demonstrating that the competency extends to applied judgment beyond formal academic examinations.

The relationship can also be understood through Bloom's revised taxonomy. Remembering and understanding provide foundational knowledge, while applying, analyzing, evaluating, and creating involve progressively more complex forms of cognitive processing. Academic tasks frequently require learners to move across these levels. A student may initially remember a concept, demonstrate understanding of its meaning, apply it to a problem, analyze relationships, evaluate alternative explanations, and eventually create a solution or argument. Consequently, examining critical thinking only as an overall score may obscure which cognitive processes are most closely related to academic performance.

This issue is particularly relevant to the present study because the six dimensions—analyzing, evaluating, creating, remembering, understanding, and applying—may not contribute equally to academic outcomes. For example, a student may demonstrate adequate knowledge and understanding but experience difficulty applying that knowledge to unfamiliar situations. Another learner may perform well in analysis and evaluation but demonstrate weaker performance in creating new responses. Examining the dimensions individually therefore provides a more differentiated picture of students' cognitive profiles.

The relationship between critical thinking and reading comprehension further strengthens the theoretical basis for examining these variables together. Reading complex texts requires students to identify central ideas, infer unstated information, examine arguments, distinguish relevant from irrelevant evidence, and evaluate claims. Empirical research has demonstrated that critical-thinking instruction can improve reading comprehension, while correlational studies have found significant relationships between critical thinking and comprehension performance. Thus, critical thinking may function as both a cognitive outcome of academic learning and a resource that supports students' engagement with demanding texts.

Taken together, the literature suggests that critical thinking is meaningfully associated with academic performance, but the nature and strength of this association may depend on learners' age, subject area, instructional environment, and the specific cognitive dimensions being measured. This supports the need for localized empirical research that examines critical thinking alongside reading comprehension and actual academic performance rather than treating these constructs independently.

METHODOLOGY

Research Design

This study employed a quantitative descriptive-correlational research design to determine the levels of students' reading comprehension, critical thinking skills, and academic performance and to examine the relationships

between reading comprehension and academic performance and between critical thinking skills and academic performance. The participants were students enrolled in Grades 7 to 10 at Valladolid National High School–Ayungon Annex during School Year 2024–2025.

The descriptive component was used to determine the existing levels of the study variables. Reading comprehension was assessed according to the independent, instructional, and frustration levels; critical thinking was examined overall and across six dimensions—remembering, understanding, applying, analyzing, evaluating, and creating; and academic performance was determined from students' official school records.

The correlational component was used to determine whether statistically significant relationships existed between reading comprehension and academic performance and between critical thinking skills and academic performance. Spearman's rank-order correlation was used for the correlational analyses because the study examined the association between students' obtained scores and academic performance without manipulating any variable.

The design was appropriate because the study examined naturally occurring characteristics within an authentic school setting. No treatment, intervention, or experimental manipulation was introduced. Accordingly, the findings were interpreted in terms of the strength, direction, and statistical significance of associations and were not used to establish causal relationships.

Research Locale and Participants

The study was conducted at Valladolid National High School–Ayungon Annex, District of Valladolid, Negros Occidental, during School Year 2024–2025. The participants were students enrolled in Grades 7 to 10 during the period of the study.

The accessible population consisted of 167 students. Since the population was manageable, the researcher employed total enumeration sampling, whereby all eligible students in the identified population were included in the study.

Table 1. Distribution of Participant by Grade Level and Section

Grade Level	Population	Sample Size
7-Mercury	41	41
8-Love	33	33
9-Tungsten	44	44
10-Diamond	25	25
10-Beryl	24	24
Total	167	167

The final sample consisted of 167 students, representing the entire accessible population.

Research Instruments

Three sources of data were utilized to measure the variables of the study: a reading comprehension assessment, a critical-thinking instrument, and students' official academic records.

Reading Comprehension Assessment

Students' reading comprehension was assessed using the Philippine Informal Reading Inventory (Phil-IRI). The assessment consisted of 20 items and classified students according to three reading-comprehension levels: independent, instructional, and frustration. The students' scores were interpreted according to the prescribed classification of the instrument.

For purposes of the present study, the reading-comprehension classification was interpreted as follows:

Reading Comprehension Level

Percentile Rank	Interpretation
100%-80%	Independent
79%-59%	Instructional
58% and below	Frustration

The resulting scores were used to answer Research Question 1, which sought to determine the level of students' reading comprehension.

Critical Thinking Instrument

Students' critical thinking skills were measured using a 25-item critical-thinking instrument based on the Critical Thinking Questionnaire – Construction and Application of Critical Thinking Test Tool developed by Aleksander Kobylarek, Luba Ślósarz, and Kamil Błaszczński. The instrument was developed using Bloom's taxonomy and assessed six cognitive dimensions: remembering, understanding, applying, analyzing, evaluating, and creating.

The instrument generated both an overall critical-thinking score and scores for each of the six dimensions. These scores were used to answer Research Question 2 and to examine the relationships specified in Research Question 5.

The five-point response scale was interpreted as follows:

Scale	Mean Score Range	Description	Interpretation
5	4.21 – 5.00	Stongly Agree	Very High
4	3.41 – 4.20	Agree	High
3	2.61 – 3.40	Neutral	Moderate
2	1.81 – 2.60	Disagree	Low
1	1.00 – 1.80	Strongly Disagree	Very Low

Academic Performance

Students' academic performance was measured using their official SF9 (Report Card) records. The recorded general average served as the indicator of academic performance. This measure was used to answer Research Question 3 and as the academic-performance variable in Research Questions 4 and 5.

The following grading descriptors were used:

Mean Score Range	Interpretation
90–100	Outstanding
85–89	Very Satisfactory
80–84	Satisfactory
75–79	Fairly Satisfactory
Below 75	Did Not Meet Expectations

Validity and Reliability

The study employed established instruments to measure reading comprehension and critical thinking skills. Reading comprehension was assessed using the **Philippine Informal Reading Inventory (Phil-IRI)**, an established school-based assessment designed to determine learners' reading performance and reading levels. Critical thinking was measured using a **25-item instrument** based on the *Critical Thinking Questionnaire* –

Construction and Application of Critical Thinking Test Tool developed by Aleksander Kobylarek, Luba Ślósarz, and Kamil Błaszczński. The instrument was structured according to **Bloom's Taxonomy** and assessed six cognitive dimensions: remembering, understanding, applying, analyzing, evaluating, and creating.

For validity, the critical-thinking instrument demonstrated clear **content and construct alignment** with the intended cognitive framework. The 25 items were organized according to the six cognitive dimensions of Bloom's Taxonomy, with items specifically designated to measure remembering, understanding, applying, analyzing, evaluating, and creating. This explicit correspondence provided a basis for assessing critical thinking as an overall construct while also allowing analysis of its individual cognitive dimensions. Since the study utilized an established instrument based on a previously developed assessment framework, the researcher did not undertake the construction of a new instrument or an initial validation process. The instruments were administered and scored according to their prescribed procedures and scoring guidelines.

The **internal consistency reliability** of the 25-item critical-thinking instrument was examined using the responses of the **167 participants** in the present study. Cronbach's alpha was calculated after negatively worded items were reverse-scored. The resulting coefficient was $\alpha = .909$, indicating **excellent internal consistency** for the complete instrument. This sample-specific reliability evidence indicates that the items demonstrated a high degree of consistency in measuring the overall critical-thinking construct among the participants. The result therefore strengthens the reliability of the instrument for the descriptive and correlational analyses conducted in the study.

Reliability coefficients were also examined for the six cognitive dimensions. The coefficients were **.813 for evaluating, .668 for creating, .740 for applying, .418 for analyzing, .464 for remembering, and .679 for understanding**. These dimension-level coefficients were interpreted cautiously because the dimensions contained relatively few items, which can affect Cronbach's alpha values. In particular, the remembering dimension consisted of only three items. Despite the variation in the dimension-level coefficients, the **overall $\alpha = .909$** demonstrates strong internal consistency for the complete 25-item instrument and provides the principal reliability evidence for the overall critical-thinking measure used in the study.

For reading comprehension, the **Phil-IRI** was used as an established assessment of learners' reading performance and reading levels. The assessment was administered and interpreted following its prescribed procedures rather than being subjected to researcher-developed instrument construction or validation. Similarly, academic performance was not measured through a researcher-developed instrument. Instead, students' **official School Form 9 (SF9) records** were used, with the recorded general average serving as the indicator of academic performance. The use of official school records provided an existing school-based measure of students' academic achievement.

Overall, the use of established assessment tools, alignment of the critical-thinking items with the specified cognitive dimensions, and the sample-specific Cronbach's alpha coefficient of **.909** provide appropriate validity and reliability evidence for the measures employed in the study. The reliability findings, particularly for the complete critical-thinking instrument, support the consistency of the measurements used in the subsequent descriptive and correlational analyses.

Data-Gathering Procedure

Before data collection, the researcher secured the necessary permission from the Schools Division Superintendent of the Division of Negros Occidental and obtained authorization from the school head of Valladolid National High School–Ayungon Annex.

Following the approval of the study, the researcher complied with the required consent procedures and explained the purpose and procedures of the study to the participants. The reading comprehension and critical-thinking instruments were then administered to the participants according to their respective grade levels and sections.

After administration, the completed instruments were collected and checked for completeness. The students' academic-performance data were subsequently obtained from their official SF9 records through the appropriate school procedures. The collected information was coded, organized, and prepared for statistical analysis.

Throughout the data-gathering process, the researcher maintained the confidentiality of participants' responses and academic records. Names and other personally identifying information were excluded from the analytical dataset.

Ethical Considerations

The study observed the ethical requirements applicable to school-based research involving student participants. Participation was voluntary, and the required consent procedures were completed before data collection. Participants were informed of the purpose of the study, the nature of their participation, and the confidential treatment of their responses.

Participant information was protected through coding and anonymization. Academic records obtained from SF9 were treated as confidential school information and were accessed only for the authorized purposes of the study. The results were reported in aggregate form to prevent the identification of individual participants.

Data Analysis

The statistical procedures were selected according to the five research questions of the study.

Research Question 1: Reading Comprehension

To determine the level of students' reading comprehension, the mean, frequency, and percentage were used. The mean was used to summarize the students' overall reading-comprehension performance, while frequency and percentage were used to describe the distribution of students according to the independent, instructional, and frustration reading levels.

The analysis showed that the students' overall reading comprehension was at the instructional level, with a mean score of 79.27.

Research Question 2: Critical Thinking Skills

To determine the level of students' critical thinking skills, the arithmetic mean was used. Mean scores were computed for the overall critical-thinking measure and for each of the six dimensions: remembering, understanding, applying, analyzing, evaluating, and creating.

The overall critical-thinking result indicated a moderate level, with a mean of 2.94. The dimensional results were also examined separately to identify differences in students' cognitive performance across the six dimensions.

Research Question 3: Academic Performance

To determine the level of students' academic performance, the mean was used to summarize the students' general averages obtained from their SF9 records.

The students demonstrated an overall academic performance described as Very Satisfactory, with a mean of 86.43.

Research Question 4: Reading Comprehension and Academic Performance

To determine whether a statistically significant relationship existed between students' reading comprehension and academic performance, Spearman's rank-order correlation coefficient (ρ) was employed.

Spearman's rho was used to determine the direction and strength of the association between reading comprehension scores and academic-performance scores. The statistical significance of the correlation was evaluated using the corresponding p-value at the 0.05 level of significance.

A p-value less than 0.05 was interpreted as indicating a statistically significant relationship, whereas a p-value equal to or greater than 0.05 was interpreted as indicating no statistically significant relationship.

Research Question 5: Critical Thinking Skills and Academic Performance

To determine whether statistically significant relationships existed between students' critical thinking skills and academic performance, Spearman's rank-order correlation coefficient (ρ) was likewise employed.

The analysis was conducted for the overall critical-thinking score and for each of the six dimensions:

1. remembering;
2. understanding;
3. applying;
4. analyzing;
5. evaluating; and
6. creating.

The corresponding correlation coefficients were interpreted according to their direction and magnitude, while the associated p-values were used to determine statistical significance at the 0.05 level.

This analysis allowed the study to determine whether students' levels of critical thinking, both overall and by dimension, were statistically associated with their academic performance.

RESULTS AND DISCUSSIONS

Reading Comprehension Level

Table 1 presents the reading comprehension levels of the 167 students.

Table 1. Reading Comprehension Level of Students

Level of Reading Comprehension	F	Mean	Interpretation
Independent	46	79.27	Instructional
Instructional	115		
Frustration	6		
Total	167		

Note. The mean of 79.27 represents the overall reading-comprehension score, while the frequencies represent the distribution of students across the three reading levels.

The distribution of students across the three reading-comprehension levels is presented in Figure 1.

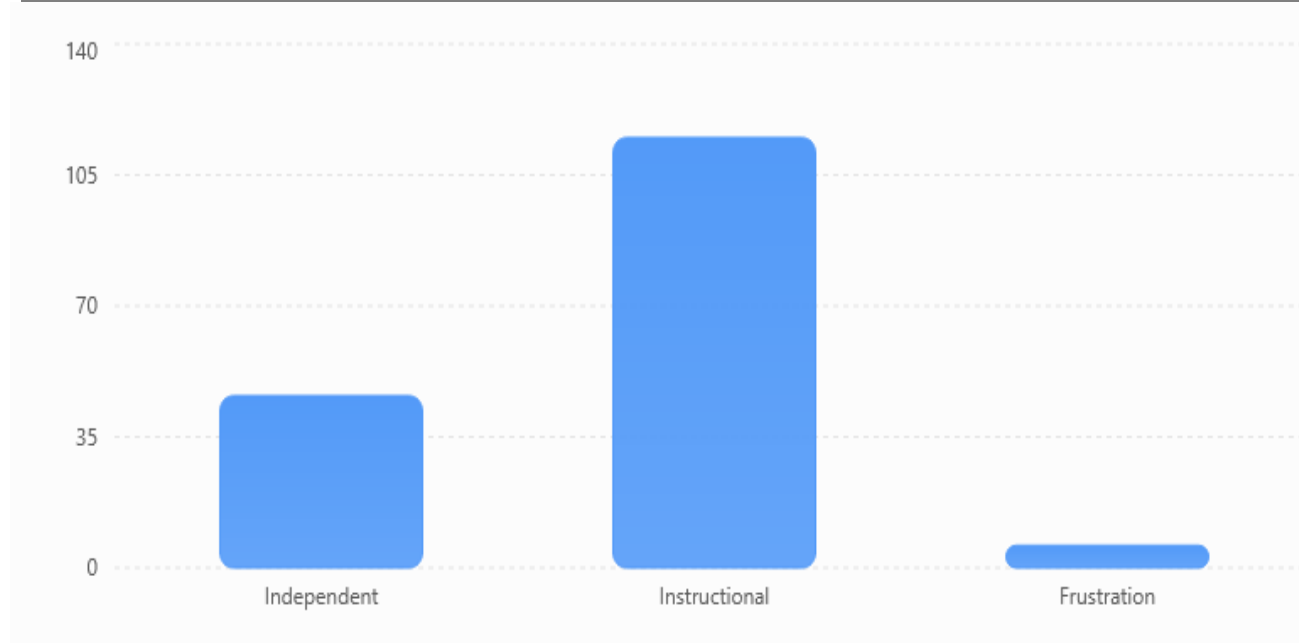


Figure 1. Distribution of Students by Reading Comprehension Level

The figure should show Independent = 46 (27.54%), Instructional = 115 (68.86%), and Frustration = 6 (3.59%).

The findings indicate that most students were classified at the **instructional level** of reading comprehension. Of the 167 participants, 115 (68.86%) were at the instructional level, followed by 46 (27.54%) at the independent level and 6 (3.59%) at the frustration level. The overall mean score of 79.27 was likewise interpreted as instructional. Thus, although most students demonstrated functional comprehension, many still required instructional support when texts involved complex ideas, unfamiliar vocabulary, inference, or the integration of information.

The predominance of the instructional level may be interpreted through Schema Theory. Students may understand texts with guidance but experience greater difficulty when they must independently activate relevant prior knowledge and connect it with unfamiliar information. This suggests that strengthening prior-knowledge activation and text-to-knowledge connections may support movement toward more independent comprehension.

This result also provides context for the students' critical-thinking performance. Independent comprehension requires learners to move beyond identifying explicitly stated information toward making inferences, examining relationships, evaluating evidence, and integrating information. Students who still require guidance in these processes may likewise experience difficulty independently transferring knowledge to unfamiliar situations. This interpretation is particularly relevant to the low applying score presented in Table 2.

The six students classified at the frustration level may require more intensive and individualized support. However, because 68.86% of the respondents were at the instructional level, intervention should not be limited to the smallest group of struggling readers. Guided reading and differentiated comprehension support may benefit a substantial proportion of the student population.

Critical Thinking Skills

Table 2 presents the students' overall critical thinking skills and their performance across the six cognitive dimensions.

Table 2. Level of students' critical thinking skills.

Critical Thinking Skills	N	Mean	Interpretation
Analyzing	167	3.00	Moderate

Evaluating	167	3.19	Moderate
Creating	167	3.04	Moderate
Remembering	167	3.04	Moderate
Understanding	167	3.00	Moderate
Applying	167	2.37	Low
As a whole	167	2.94	Moderate

The mean scores across the six critical-thinking dimensions are presented in Figure 2.

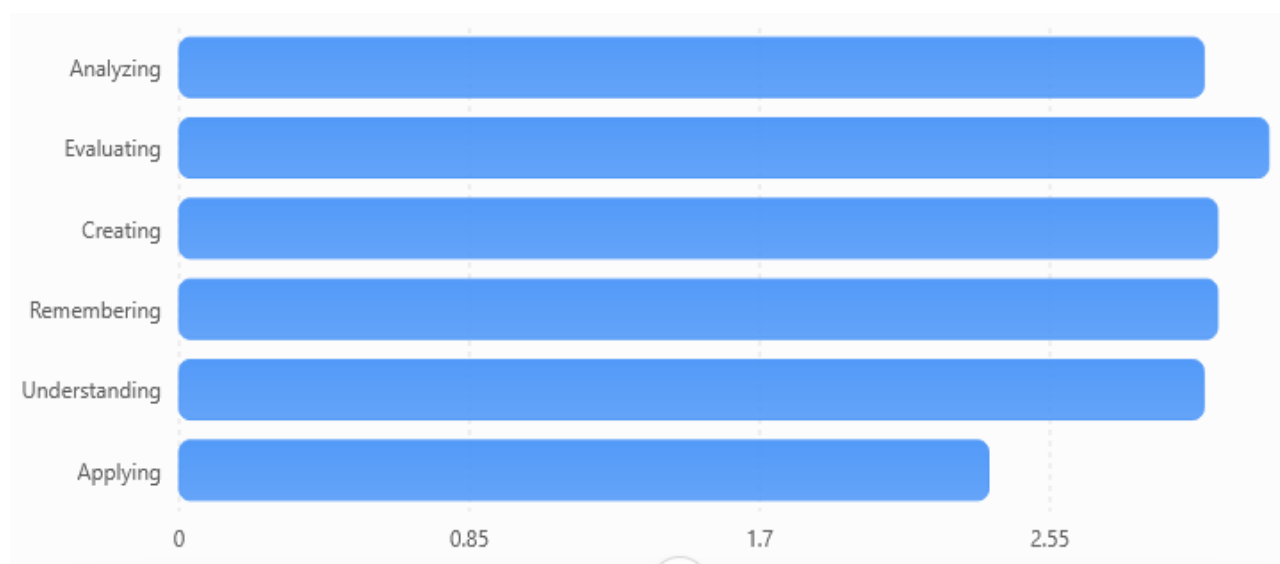


Figure 2. Mean Scores Across Critical-Thinking Dimensions

Evaluating obtained the highest mean score (3.19), while applying obtained the lowest mean score (2.37), indicating a particular area for instructional attention.

The results show that students demonstrated an overall **moderate level of critical thinking** ($M = 2.94$). Five dimensions—analyzing ($M = 3.00$), evaluating ($M = 3.19$), creating ($M = 3.04$), remembering ($M = 3.04$), and understanding ($M = 3.00$)—were classified as moderate. Evaluating obtained the highest mean, whereas applying obtained the lowest mean ($M = 2.37$) and was classified as low.

The comparatively higher score for evaluating suggests that students demonstrated a developing ability to make judgments and assess information. However, because the result remained within the moderate category, it should not be interpreted as evidence of advanced evaluative competence. Students may still benefit from activities requiring them to justify judgments, identify supporting evidence, compare alternatives, and apply explicit criteria.

The low applying score ($M = 2.37$) is particularly noteworthy within Bloom's revised taxonomy because applying requires learners to transfer previously acquired knowledge to a particular situation. The finding suggests that students may understand concepts in familiar contexts but experience difficulty determining when and how to use them in unfamiliar situations. This pattern may reflect a need for more deliberate opportunities for knowledge transfer through contextualized problems, authentic tasks, and guided practice.

The result may also be interpreted through **Schema Theory**. Possessing knowledge is not always sufficient for successful performance in an unfamiliar situation. Learners must also activate relevant knowledge structures and connect them with the demands of a new task. When this connection is not immediately apparent, students may require additional prompts, modeling, examples, and guided practice. Therefore, the low applying score may reflect difficulty in **knowledge transfer and schema activation** rather than the complete absence of conceptual knowledge.

The combination of instructional-level reading comprehension and low applying performance is noteworthy. Reading comprehension requires learners to connect new textual information with prior knowledge, while applying requires them to transfer knowledge to another situation. These findings do not establish a causal relationship; however, together they provide a theoretically coherent picture of learners who may benefit from additional support in independently constructing meaning and transferring knowledge.

Academic Performance

Table 3 presents the academic performance of the students based on their SF9 records.

Table 3. Level of Students' Academic Performance

Level of Academic Performance	F	Mean	Interpretation
Outstanding	40	86.43	Very Satisfactory
Very Satisfactory	77		
Satisfactory	46		
Fairly Satisfactory	4		
Did Not Meet Expectations	0		
Total	167		

Note. The overall mean of 86.43 was interpreted as Very Satisfactory.

The distribution of students across academic-performance classifications is shown in Figure 3.

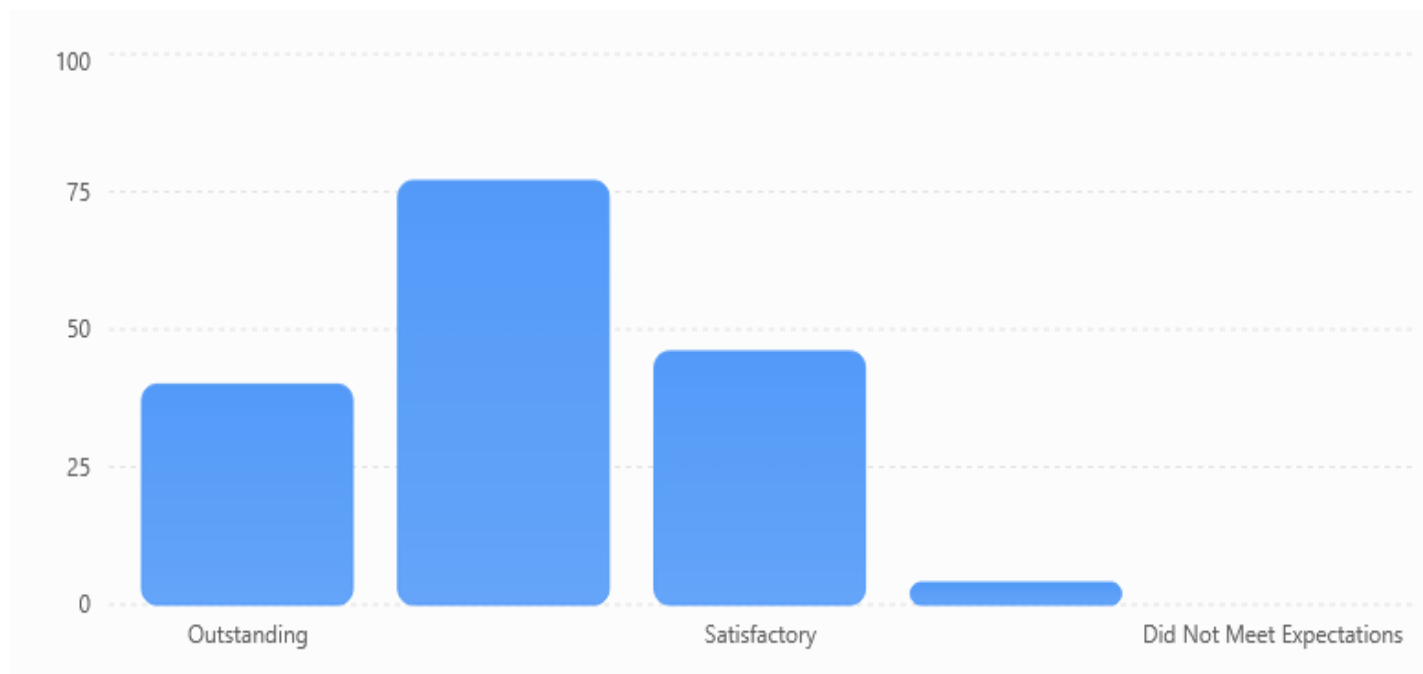


Figure 3. Distribution of Students by Academic Performance

Most students were classified as Very Satisfactory (46.11%), followed by Satisfactory (27.54%) and Outstanding (23.95%).

The students demonstrated generally favorable academic performance, with an overall mean of **86.43**, interpreted as Very Satisfactory. Most students were classified as very satisfactory (46.11%), followed by satisfactory (27.54%) and outstanding (23.95%). Only four students (2.40%) were classified as fairly satisfactory, and none were classified as did not meet expectations.

Although the overall academic profile was favorable, achievement was not uniform. More than one-fourth of the students remained in the satisfactory category, indicating that there was still room for improvement. At the same time, the absence of students in the lowest performance category should not be interpreted as evidence that particular school practices caused the favorable results because the study employed a descriptive-correlational design.

An important observation is the difference between the students' **Very Satisfactory academic performance**, **instructional reading comprehension**, and **moderate critical-thinking skills**. This suggests that favorable academic grades should not automatically be interpreted as equally high proficiency across all cognitive domains. Academic grades reflect performance across multiple subjects and assessment activities and may also be influenced by participation, motivation, learning behaviors, instructional support, and assessment practices.

Relationship Between Reading Comprehension and Academic Performance

Table 4 presents the relationship between students' reading comprehension and academic performance.

Table 4. Relationship Between Reading Comprehension and Academic Performance

Level of Reading Comprehension	Level of Academic Performance					
	Outstanding	Very Satisfactory	Satisfactory	Fairly Satisfactory	Did Not Meet Expectations	Total
Independent	27	18	1	0	0	46
Instructional	13	59	39	4	0	115
Frustration	0	0	6	0	0	6
Total	40	77	46	4	0	167
Computed value (G)	: 0.86					
p-value	: <0.001					
Decision	: Reject Ho					
Interpretation	: Significant at 0.05 level of significance					

The analysis produced a **strong, positive, and statistically significant ordinal association** between reading comprehension and academic performance ($G = 0.86$, $p < .001$). The null hypothesis was therefore rejected at the 0.05 level of significance. The positive Gamma coefficient indicates that students with higher reading-comprehension classifications tended to have higher academic-performance classifications.

The distribution further illustrates this pattern. Of the 46 students classified at the independent reading level, 27 attained outstanding academic performance and 18 attained very satisfactory performance. In contrast, among the 115 students at the instructional level, most were classified as very satisfactory or satisfactory. The six students at the frustration level were all classified as satisfactory.

The strong Gamma coefficient indicates a substantial ordinal association. However, the finding should be interpreted as an **association rather than a causal relationship**. Because the study employed a descriptive-correlational design, the significant relationship should be interpreted as an association rather than evidence of causation. Other learner, instructional, and contextual factors may also contribute to reading comprehension, critical thinking, and academic performance.

The finding is theoretically consistent with **Schema Theory**, as academic learning frequently requires students to integrate new information with prior knowledge. Students who can independently construct meaning from written instructions, textbooks, explanations, and assessment questions may be better positioned to engage successfully with academic tasks across subject areas.

Relationship Between Critical Thinking and Academic Performance

Table 5 presents the relationship between overall critical thinking and academic performance.

Table 5. Relationship Between Overall Critical Thinking and Academic Performance.

Level of Critical Thinking Skills	Level of Academic Performance					
	Outstanding	Very Satisfactory	Satisfactory	Fairly Satisfactory	Did Not Meet Expectations	Total
Very High	1	0	0	0	0	1
High	17	15	2	0	0	34
Moderate	17	37	27	3	0	84
Low	3	23	17	1	0	44
Very Low	2	2	0	0	0	4
Total	40	77	46	4	0	167
Computed value (G)	: 0.41					
p-value	: <0.001					
Decision	: Reject Ho					
Interpretation	: Significant at 0.05 level of significance					

A **positive and statistically significant association** was found between overall critical thinking and academic performance ($G = 0.41$, $p < .001$). Students with higher critical-thinking classifications tended to have higher academic-performance classifications.

The Gamma coefficient indicates a positive association, although it was weaker than the relationship observed between reading comprehension and academic performance ($G = 0.86$). This distinction is important because statistical significance does not necessarily indicate the same strength of association.

The finding can be interpreted through **Bloom's revised taxonomy**, which recognizes that academic tasks may involve multiple cognitive processes, including remembering, understanding, applying, analyzing, evaluating, and creating. Students' capacity to engage in these processes may therefore be associated with academic performance, although academic achievement should not be attributed to critical thinking alone.

The overall significant relationship also supports examining the six critical-thinking dimensions separately because a composite score may conceal differences among individual cognitive processes.

Relationship Between Critical Thinking Dimensions and Academic Performance

Table 6 summarizes the relationships between the six critical-thinking dimensions and academic performance.

Table 6: Relationships Between Critical Thinking Dimensions and Academic Performance

Critical Thinking Dimension	Gamma (G)	p-value	Decision	Interpretation
Analyzing	0.10	.337	Fail to reject Ho	Not significant
Evaluating	0.36	< .001	Reject Ho	Significant
Creating	0.24	.021	Reject Ho	Significant
Remembering	0.37	< .001	Reject Ho	Significant
Understanding	0.32	.005	Reject Ho	Significant
Applying	0.27	.007	Reject Ho	Significant

Note. Statistical significance was evaluated at the 0.05 level. The values in Table 6 are based on Goodman and Kruskal's Gamma for the ordinal classifications.

The relationships among the six critical-thinking dimensions and academic performance are visually summarized in Figure 4.

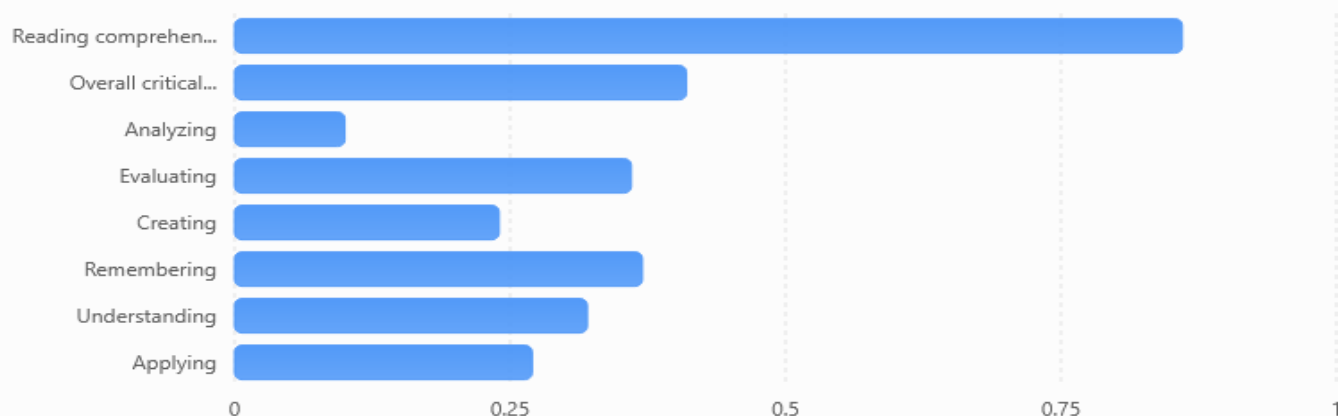


Figure 4. Goodman and Kruskal's Gamma Associations With Academic Performance.

Reading comprehension demonstrated the strongest positive association with academic performance ($G = 0.86$), followed by overall critical thinking ($G = 0.41$). Among the critical-thinking dimensions, analyzing showed the weakest association ($G = 0.10$) and was not statistically significant ($p = .337$).

The results show that evaluating ($G = 0.36$, $p < .001$), creating ($G = 0.24$, $p = .021$), remembering ($G = 0.37$, $p < .001$), understanding ($G = 0.32$, $p = .005$), and applying ($G = 0.27$, $p = .007$) were significantly associated with academic performance. In contrast, analyzing demonstrated a weak positive association that was not statistically significant ($G = 0.10$, $p = .337$).

The significant associations indicate that academic performance was related to several cognitive processes rather than a single dimension of critical thinking. The finding for applying is particularly noteworthy because applying had the lowest mean among the six dimensions ($M = 2.37$), yet individual differences in applying were significantly associated with academic performance. Thus, a low average level does not mean that the skill is unrelated to academic achievement.

Analyzing and Academic Performance

Although students demonstrated a moderate level of analyzing ($M = 3.00$), its association with academic performance was weak and not statistically significant ($G = 0.10$, $p = .337$). Thus, the study failed to reject the null hypothesis for this dimension. This finding does not demonstrate that analyzing is unimportant to academic achievement; rather, there was insufficient evidence of a statistically significant ordinal association within this sample.

Several cautious explanations are possible. First, overall academic grades reflect multiple aspects of performance and may not depend primarily on analytical reasoning. Second, SF9 grades combine results across subjects and assessment tasks that may differ in the extent to which they require explicit analysis. Third, the analytical processes measured by the instrument may not fully correspond with the forms of analysis assessed in classroom activities. In addition, the concentration of students within the satisfactory and very satisfactory categories may have limited the ability to detect smaller differences through ordinal association.

Therefore, the weak result should be interpreted as **context-specific and non-conclusive**. Further research using larger samples, broader measures of analytical reasoning, and subject-specific academic outcomes may clarify whether this pattern remains consistent across educational settings.

Discussion and Educational Implications

Taken together, the findings suggest a need to integrate reading comprehension and higher-order thinking instruction. The predominance of instructional-level reading comprehension and the low applying score indicate

that students may benefit from activities that help them connect prior knowledge with new information and subsequently transfer that knowledge to unfamiliar situations.

Teachers may use a **Learn–Practice–Transfer sequence** in which students first comprehend a concept through reading, practice it with guidance, and then apply it to a new or authentic situation. Prior knowledge may be activated through concept maps, anticipation guides, prediction questions, and vocabulary preparation. During and after reading, students can engage in annotation, evidence-based questioning, problem solving, and reflective discussion.

Integrated activities may further strengthen both literacy and higher-order thinking. For example, a **Read–Analyze–Decide** activity can require students to read a text, identify an issue, examine evidence, evaluate alternatives, and justify a decision. A **Text-to-Real-Life Transfer** task can ask learners to apply ideas from a reading selection to a school or community situation. Such activities provide structured opportunities to move from comprehension toward application, evaluation, and creation.

Limitations of the Study

This study has several limitations that should be considered when interpreting its findings. First, it was conducted in **only one school, Valladolid National High School–Ayungon Annex**, with **167 students from Grades 7 to 10**. The findings therefore reflect a specific school and learner context and may not be generalizable to students from other schools, districts, grade levels, or educational settings. Future studies involving larger and more diverse samples across multiple schools are recommended.

Second, the study employed a **descriptive-correlational design**. Although Goodman and Kruskal's Gamma identified significant associations among the variables, the results do not establish causal relationships. Thus, the findings cannot conclude that reading comprehension or critical thinking directly causes higher academic performance. Other factors, such as motivation, prior achievement, instructional practices, home support, and learning resources, may also influence the outcomes.

Third, **academic performance was based on students' SF9 grades**, which represent performance across different subjects and assessment activities. Grades may therefore reflect factors beyond reading comprehension and critical thinking, including classroom participation, performance tasks, assessment practices, and teacher judgments.

Fourth, the **25-item critical-thinking instrument** may not fully capture the complexity of the six cognitive dimensions measured. This is particularly relevant to the non-significant relationship between analyzing and academic performance ($G = 0.10$, $p = .337$), which should be interpreted cautiously. Similarly, the reading assessment represents performance within a particular assessment context and may not reflect students' abilities across all text types and situations.

Finally, although the findings were interpreted using **Schema Theory and Bloom's revised taxonomy**, the study did not directly measure factors such as prior knowledge, schema activation, or knowledge transfer. Therefore, explanations involving these processes should be regarded as theoretically plausible rather than directly established by the data.

Despite these limitations, the study provides useful **context-specific evidence** on the relationships among reading comprehension, critical thinking, and academic performance. Future research should consider **larger, multi-school samples, longitudinal or experimental designs, broader measures of reading and critical thinking, and additional learner and contextual factors** to determine whether the present findings can be replicated and generalized.

CONCLUSION

This study examined the relationship among reading comprehension, critical thinking skills, and academic performance of 167 students at Valladolid National High School–Ayungon Annex. The findings showed that the

students generally demonstrated an **instructional level of reading comprehension**, with the majority requiring continued support to comprehend increasingly complex texts independently. Their overall critical-thinking skills were **moderate**, with evaluating obtaining the highest mean and applying the lowest. Academic performance, however, was generally **very satisfactory**, indicating that favorable academic grades did not necessarily correspond to equally high levels of reading comprehension and critical-thinking performance across all cognitive domains.

The analysis further showed a **strong, positive, and statistically significant association between reading comprehension and academic performance** ($G = 0.86, p < .001$). Overall critical thinking was likewise positively and significantly associated with academic performance, although the relationship was more moderate ($G = 0.41, p < .001$). When critical thinking was examined by dimension, remembering, understanding, applying, evaluating, and creating demonstrated significant associations with academic performance, whereas analyzing showed a weak and non-significant association ($G = 0.10, p = .337$). These findings demonstrate that the relationship between critical thinking and academic performance is not uniform across all cognitive processes and that examining individual dimensions can provide a more nuanced understanding of students' learning profiles.

Taken together, the findings highlight the importance of strengthening both **literacy and higher-order thinking** in classroom instruction. The predominance of instructional-level reading comprehension and the low applying score suggest a particular need to help students connect prior knowledge with new information and transfer what they have learned to unfamiliar situations. Consistent with the study's theoretical framework, instruction should provide structured opportunities for learners to construct meaning, activate relevant prior knowledge, and progressively move from understanding toward applying, analyzing, evaluating, and creating.

The broader implication is that reading comprehension and critical thinking should not be developed as separate classroom competencies. Learning activities can integrate both through tasks that require students to read and interpret texts, examine evidence, solve authentic problems, make reasoned judgments, and apply ideas to real-life or unfamiliar contexts. Strategies such as guided reading, questioning, concept mapping, evidence-based discussion, contextualized problem solving, and authentic performance tasks may provide opportunities for this integration. A gradual progression from teacher modeling and guided practice toward more independent application may be particularly beneficial for learners who remain at the instructional level of reading.

The findings should, however, be interpreted within the context of the study's descriptive-correlational design and single-school setting. The observed relationships indicate associations and do not establish causal effects. Nevertheless, the results provide useful context-specific evidence that supports continued attention to reading comprehension and the development of higher-order cognitive processes. Future research involving broader samples and designs that directly examine prior knowledge, knowledge transfer, and instructional interventions may further clarify how integrated literacy and higher-order-thinking approaches can support students' academic development

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