

Critical Thinking Skills and Reading Comprehension of the Junior High School Students of Taway National High School

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Publication history:

Received: August 11, 2026

Revised: September 6, 2026

Accepted: September 12, 2026

Published: September 13, 2026

International Journal of Sustainable and Integrated Studies, Vol. 1, No. 2, pp. 323–330, September 2026.

Abstract

This study determined the levels of critical thinking skills and reading comprehension among 138 Junior High School students of Taway National High School, Ipil, Zamboanga Sibugay, during School Year 2025–2026, examined differences according to selected demographic and reading-related profile variables, tested the relationship between the two variables, and developed an evidence-based instructional enhancement program. Anchored on Bloom’s Revised Taxonomy and related cognitive frameworks, the research employed a descriptive-correlational design. Respondents were selected through stratified random sampling from a population of 214 learners. Data were gathered using a researcher-adapted Critical Thinking Questionnaire covering the six cognitive domains and the Philippine Informal Reading Inventory (Phil-IRI) English Test assessing literal, inferential, and evaluative comprehension. Statistical analyses included frequency counts, percentages, means, standard deviations, independent-samples t-tests, one-way ANOVA, and Pearson product-moment correlation. Findings showed a high overall level of critical thinking skills but a developing level of reading comprehension, with most students at beginning or developing proficiency and evaluative comprehension recording the lowest performance. Most profile variables yielded no significant differences; however, grade level, reading engagement, and parental involvement produced significant differences in selected aspects. A significant positive relationship existed between critical thinking skills and reading comprehension. These results informed the design of the THINK-READ (Thinking through Higher-order Inquiry, Nurturing Knowledge, and Reading Engagement for Academic Development) Instructional Enhancement Program integrating guided reading, higher-order questioning, metacognitive strategies, collaborative learning, and parent engagement. The study contributes to Sustainable Development Goal 4 (Quality Education) by generating localized evidence and a practical intervention that strengthen foundational literacy and higher-order thinking. It supports educational and institutional sustainability by equipping a rural public secondary school with an evidence-based, scalable approach to improve learner outcomes and teacher practice.

Keywords: Bloom’s Revised Taxonomy; Critical Thinking Skills; Instructional Enhancement Program; Junior High School Students; Literacy Intervention; Philippine Informal Reading Inventory (Phil-IRI); Reading Comprehension

1. Introduction

Critical thinking transcends academic complement to become a core competency for independent, rational thought. Contemporary frameworks stress reasoning, reflection, and sound judgment. Despite curricular reforms, practical measurement and instruction remain complex. Reading comprehension requires phonology, syntax, semantics, and pragmatics in dynamic reader-text interaction (Namaziandost et al., 2020). Persistent low PISA

performance and local Phil-IRI results underscore systemic barriers including inadequate teacher training, limited materials, and overcrowded classrooms. Informal observations at Taway National High School indicate reliance on memorization over critical engagement, compounded by limited access to engaging materials and absence of structured higher-order programs. No prior formal research at the school has examined correlations between critical thinking skills and reading comprehension among Junior High School students, creating a localized knowledge gap this study addresses through quantitative investigation of Grades 7–10 learners using stratified sampling, a Critical Thinking Questionnaire, and the Phil-IRI English Test.

Foreign literature establishes critical thinking as purposeful, self-regulatory judgment involving interpretation, analysis, evaluation, and inference (Facione, 1990). Ennis (2022) distinguishes abilities (analyzing arguments, drawing conclusions) from dispositions (open-mindedness, fair-mindedness). Metacognition enables monitoring and regulation of cognitive processes (Flavell, 1979). Reading comprehension constructs meaning through schema activation (Anderson, 1984), operating at literal, inferential, and evaluative levels. Constructivist theory frames learning as active knowledge construction via experience and interaction (Piaget, 1972; Vygotsky, 1978), while Information Processing Theory and Cognitive Load Theory explain attention, working-memory limits, and the need for structured strategies (Atkinson & Shiffrin, 1968; Sweller, 1988). Bloom's Revised Taxonomy progresses from remembering and understanding to analyzing, evaluating, and creating (Anderson & Krathwohl, 2001). Paul and Elder (2008) emphasize intellectual standards of clarity, accuracy, relevance, logic, depth, breadth, and fairness. Empirical studies confirm positive relationships between critical thinking and reading comprehension. Arshad et al. (2020) found significant correlations among Pakistani secondary students; Zhou and Zhu (2023) linked higher analysis and evaluation to better interpretation, inference, and synthesis among Chinese middle-school students; Ahmed and Khan (2022) showed gains from explicit critical-thinking strategies among EFL learners. Instructional approaches including Socratic seminars (Ferrer & del Rosario, 2021), inquiry-based learning (DuFour & Marzano, 2019), strategy-based instruction (Duke & Cartwright, 2021), argument mapping (Kim & Park, 2022), and reciprocal teaching (Lopez & Santos, 2024) promote active engagement. Digital reading further demands evaluation of credibility and bias (Zhou & Zhu, 2023). Local studies in Zamboanga Sibugay report significant L1–L2 reading comprehension correlations (Rico & Libre, 2022; Tiempo & Macarao, 2024) and effectiveness of explicit strategy instruction (Inding, 2020). Sabordo (2026) identified residual difficulties in summarization, figurative language, and text-to-life connections among Grade 10 students despite favorable overall scores. Martinez (2011) linked critical thinking to English language competence in the Zamboanga area. Regional recovery initiatives such as RAPID and Bawat Bata Makababasa underscore ongoing reading concerns. Globally, critical thinking ranks among essential future skills (World Economic Forum, 2020), while PISA data reveal persistent Philippine reading deficits (OECD, 2015; Philstar Global, 2023). Nationally, the K-12 curriculum and ARAL Program institutionalize literacy recovery and higher-order thinking. Locally, Taway National High School mirrors rural public-school challenges: high frustration-level rates on Phil-IRI, observed reliance on memorization, limited materials, and absence of prior empirical linkage between critical thinking and reading comprehension among its Junior High School population. Studies from Buug and Zamboanga City confirm language influences and strategy efficacy while highlighting deeper-processing gaps (Rico & Libre, 2022; Tiempo & Macarao, 2024; Inding, 2020; Sabordo, 2026).

Critical thinking frameworks include Paul and Elder's (2008) intellectual standards and elements of reasoning; King and Kitchener's (2016) Reflective Judgment Model progressing from pre-reflective to reflective thinking; Bloom's Revised Taxonomy (Anderson & Krathwohl, 2001) emphasizing higher-order domains; the Socratic Method; Flavell's (1979) metacognition; Ennis' (2022) abilities and dispositions; and constructivist learning (Piaget, 1972; Vygotsky, 1978) with the Zone of Proximal Development. Reading comprehension draws on Kintsch's Construction-Integration Theory, the Simple View of Reading (Gough & Tunmer, 1986; Hoover & Tunmer, 2020), and Rosenblatt's Transactional Theory, wherein meaning arises from reader-text interaction shaped by prior knowledge, culture, and experience. Schema Theory (Anderson, 1984), Information Processing Theory (Atkinson & Shiffrin, 1968), and Cognitive Load Theory (Sweller, 1988) further explain active meaning-making and resource limits. These frameworks undergird the study's examination of critical thinking domains (remembering through creating) in relation to literal, inferential, and evaluative comprehension, with profile variables moderating differences and findings informing an instructional enhancement program.

Despite observed reading difficulties at Taway National High School and national/international evidence of literacy gaps, no formal local investigation has determined whether critical thinking skills significantly associate with reading comprehension among its Junior High School students. Local Zamboanga Sibugay studies focus primarily on elementary L1–L2 relations and strategy instruction, while broader Philippine research addresses higher-order thinking less directly in this secondary rural context. The study fills this gap by quantifying levels, testing differences by selected profile variables, examining the relationship, and generating an evidence-based THINK-READ Instructional Enhancement Program tailored to the school's needs.

The study aligns principally with SDG 4 (Quality Education) by generating localized evidence and an instructional program to strengthen foundational literacy and higher-order thinking skills essential for inclusive, equitable, and effective learning outcomes. It also supports SDG 8 (Decent Work and Economic Growth) through development of critical thinking, identified by the World Economic Forum (2020) as a core future-work competency, thereby contributing to skills that enhance employability and lifelong adaptive capacity.

By linking critical thinking development with reading comprehension improvement in a rural public-school setting, the study advances educational sustainability—ensuring learners acquire the cognitive and literacy competencies required for lifelong learning, informed citizenship, and resilience amid information complexity. It contributes to socio-economic sustainability by equipping students with skills valued in contemporary labor markets and supports institutional sustainability through evidence-based, context-responsive intervention design that schools can integrate into ongoing literacy recovery efforts.

2. Material and methods

2.1 Research Design

A quantitative descriptive-correlational research design was used to describe the levels of critical thinking skills and reading comprehension and to determine the relationship between these two variables among Junior High School students. The quantitative approach allowed measurement of skill levels and testing of significant differences or correlations according to respondents' profile variables. The correlational component examined how proficiency in critical thinking relates to reading comprehension performance without experimental manipulation. The design incorporated descriptive elements to characterize observed skill levels and is supported by methodological literature emphasizing its utility for exploring relationships between complex cognitive constructs in educational settings (Creswell & Clark, 2018; Gravetter et al., 2021). Practical considerations of data collection feasibility within a school environment during a defined academic period further guided the choice of a non-experimental correlational design.

2.2 Locale of the Study

The study was conducted in the Division of Zamboanga Sibugay at Taway National High School, a public secondary institution established in April 2013 and located in Purok Sunrise, Taway, Ipil, Zamboanga Sibugay. As of the first semester of School Year 2025–2026 the school operated with 21 teaching personnel under Principal III Mr. Rey P. Espiritu and served a student population of not less than 214 learners. The rural public secondary school setting was selected because it reflects broader national challenges in literacy and higher-order thinking skills and offers a relevant context for examining the interplay of critical thinking and reading comprehension (Reyes, 2024). Accessibility and school cooperation further supported the choice of locale.

2.3 Respondents of the Study

The target population comprised all Junior High School students enrolled in Grades 7 through 10 at Taway National High School during School Year 2025–2026. This cohort was selected because the Junior High School years constitute a critical period for the development of reading comprehension and critical thinking skills within the K–12 Basic Education Program.

2.4 Sample and Sampling Procedure

A stratified random sampling technique was employed to obtain a representative sample from the total population of 214 students. Grade levels (Grade 7, Grade 8, Grade 9, and Grade 10) served as the primary strata, with proportional allocation ensuring each grade was represented according to its share of the population. The final sample consisted of 138 respondents (62 males and 76 females). Stratified random sampling was chosen to enhance internal and external validity (Gravetter et al., 2021; Creswell & Clark, 2018). The researcher collaborated with school administration and English teachers to obtain student lists and facilitate sampling while adhering to ethical protocols and DepEd Order No. 39, s. 2018.

2.5 Research Instrument

Two primary instruments were used. The Critical Thinking Questionnaire was adapted from validated instruments anchored on Bloom's Revised Taxonomy of Cognitive Domains (Anderson & Krathwohl, 2001) and related constructs (Ennis, 2022; Facione, 1990). It assessed the six domains of remembering, understanding, applying, analyzing, evaluating, and creating through Likert-scale items ranging from "Strongly Disagree" to "Strongly Agree." Item development and refinement were guided by the research adviser and experienced English teachers familiar with current assessment practices (Garcia & Ramos, 2023). Content validity was established through expert review in 2025 focusing on clarity, relevance, appropriateness for Junior High School students, and alignment with contemporary definitions of critical thinking. Reliability was examined via the split-half method, yielding a Pearson r of .768, described as high reliability and calculated with SPSS version 21; a coefficient of .70 or higher is generally acceptable in educational research (Gravetter et al., 2021).

The Philippine Informal Reading Inventory (Phil-IRI) English Test was adopted to measure reading comprehension. Phil-IRI is a widely recognized classroom-based assessment tool in the Philippines that evaluates word recognition and comprehension across literal, inferential, and evaluative domains through standardized oral and silent reading tasks. Passages appropriate for Grades 7–10 were used, and scoring followed official Phil-IRI rubrics. The instrument possesses established validity and reliability within the Philippine educational system (DepEd, 2022). Administration adhered to standardized protocols to maintain data integrity (Gravetter et al., 2021).

2.6 Data Gathering Procedure

Data collection proceeded systematically after research proposal approval and securing of all necessary permissions. Permission was formally obtained from the principal of Taway National High School in early 2025. Junior High School teachers and advisers were informed through a formal letter detailing objectives, procedures, ethical considerations, and timeline. Data gathering occurred after the first quarter of School Year 2025–2026 so that students had settled into academic routines and baseline performance could be captured. The Critical Thinking Questionnaire and Phil-IRI English Test were administered according to standardized procedures. Informed consent and assent processes were completed prior to participation.

2.7 Data Analysis Techniques

Data were analyzed using frequency counts, percentages, mean, and standard deviation to describe levels of critical thinking skills and reading comprehension. Independent samples t-test and one-way analysis of variance (ANOVA) tested significant differences according to selected profile variables. The Pearson Product-Moment Correlation Coefficient examined the relationship between critical thinking skills and reading comprehension.

2.8 Ethical Considerations

Ethical principles were meticulously observed in accordance with contemporary guidelines for research involving human subjects, particularly minors in educational settings (American Psychological Association [APA], 2020; Israel & Hay, 2020). Formal permission was secured from the school principal. Participants, parents or guardians, and teachers received clear explanations of the study's purpose, procedures, potential risks, and benefits. Participation was entirely voluntary, and respondents retained the absolute right to withdraw at any time without negative consequences. Confidentiality and anonymity were maintained through unique identification codes; complete names were never recorded on instruments. Written informed consent was obtained from parents or legal guardians of minors, and age-appropriate assent was secured from student participants. Data were stored securely with access limited to the researcher and academic supervisor. All consent and assent forms were properly documented.

3. Results and Discussion

3.1 Demographic Profile of the Respondents

The majority of respondents were aged 13–15 years (82.6 percent), female (55.1 percent), and Cebuano (87.0 percent). Grade 7 constituted the largest group (30.4 percent), followed by Grade 10 (27.5 percent). Most students reported reading fewer than five hours per week (73.9 percent), had mothers with high-school educational attainment (63.0 percent), and participated in reading sessions with parents several times a week (34.8 percent). Online books or e-books were the most commonly used reading materials (42.8 percent). These characteristics indicate a relatively homogeneous group in age and ethnicity with moderate variation in reading habits and parental involvement, consistent with typical junior high school learners in rural Philippine settings who experience limited reading exposure yet maintain parental support. Bronfenbrenner's Ecological Systems Theory (1979) and Eccles and Roeser (2011) underscore that such background factors shape academic behaviors and outcomes, highlighting the need for instruction responsive to these demographic realities.

3.2 Level of Critical Thinking Skills

Respondents demonstrated a high overall level of critical thinking skills. Mean scores across the six domains of Bloom's Revised Taxonomy were consistently high, with the composite mean reflecting strong performance in remembering, understanding, applying, analyzing, evaluating, and creating. The high level of critical thinking readiness suggests that students possess the cognitive foundations for higher-order processing even when reading performance remains limited. This finding aligns with the recognition that critical thinking is a teachable habit of mind cultivated through reflective practice (Paul & Elder, 2008) and that Filipino learners can develop analytical skills when exposed to appropriate strategies (Delos Santos & Martinez, 2021; Garcia & Ramos, 2023).

3.3 Level of Reading Comprehension

Reading comprehension was at the developing level overall. The majority of students fell into the developing (64.5 percent) or beginning (32.6 percent) proficiency categories, with no respondents reaching the advanced level. Evaluative comprehension recorded the lowest mean performance among the three domains (literal, inferential, and evaluative). The discrepancy between high critical thinking readiness and developing reading comprehension indicates that students' cognitive potential has not yet been fully channeled into text processing. This pattern is consistent with national and local observations that Filipino learners often struggle with inferential and evaluative tasks (Tuazon, 2021; Sabordo, 2026) and that comprehension requires sustained, strategy-based instruction beyond basic decoding (Duke & Cartwright, 2021; Afflerbach et al., 2022).

3.4 Significant Differences According to Profile Variables

3.4.1 Differences by Grade Level

Significant differences appeared in selected aspects of critical thinking skills and reading comprehension when respondents were grouped by grade level. Higher grade levels tended to show modestly stronger performance in certain domains. The grade-related variation supports the developmental view that higher-order thinking and deeper comprehension emerge gradually with cumulative instructional experience (King & Kitchener, 2016; Lansangan, 2020). It also points to the need for scaffolded, grade-differentiated instruction that systematically builds analytical and evaluative skills.

3.4.2 Differences by Reading Hours

A significant difference was found in critical thinking skills across groups defined by weekly reading hours, but no significant difference emerged for reading comprehension. Students reporting more reading time showed higher critical thinking means. Increased reading volume appears associated with greater cognitive engagement and reflective processing, consistent with Bruner's Constructivist Learning Theory (1961) and Anderson and Pearson (1984). The absence of a corresponding comprehension gain, however, aligns with Pressley (2000) and Krashen (2004), who emphasize that quantity of reading must be paired with explicit strategy instruction to produce measurable comprehension improvement.

3.4.3 Differences by Mother's Educational Attainment

No significant differences were observed in either critical thinking skills or reading comprehension when respondents were grouped according to mother's educational attainment. Although Coleman's Social Capital Theory (1988) posits parental education as a predictor of academic achievement, the present results suggest that school-based factors may equalize outcomes. Bronfenbrenner's Ecological Systems Theory (1979) and Lareau (2003) support the interpretation that effective formal schooling can mitigate home-background disparities.

3.4.4 Differences by Reading Sessions with Parents

Significant differences appeared in critical thinking skills according to the frequency of parent-child reading sessions, but not in reading comprehension. More frequent sessions were associated with higher critical thinking means. Parental involvement in home reading creates opportunities for dialogue, questioning, and reflection that foster higher-order thinking, consistent with Vygotsky's Social Development Theory (1978), Epstein's Framework of School, Family, and Community Partnerships (2001), and Fan and Chen (2001). The lack of a parallel effect on comprehension underscores that structured classroom strategy instruction remains essential for measurable gains in text understanding (Duke & Pearson, 2002).

3.4.5 Differences by Perceived Parental Educational Influence and Reading Materials

No significant differences were found in critical thinking skills or reading comprehension when respondents were grouped by perceived parental educational influence or by type of reading material used. These null findings indicate that subjective perceptions of support and the specific format of materials (print versus digital) do not independently differentiate performance. Deci and Ryan's Self-Determination Theory (1985) and Bandura's Social Cognitive Theory (1986) suggest that intrinsic motivation and self-efficacy may exert stronger influence than perceived external support, while Rosenblatt's Reader-Response Theory (1978), Coiro (2003), and Mangen, Walgermo, and Brønnick (2013) affirm that cognitive engagement with the text matters more than medium.

3.5 Relationship Between Critical Thinking Skills and Reading Comprehension

A statistically significant but very weak positive correlation was found between overall critical thinking skills and overall reading comprehension. Critical thinking showed a weak positive association with inferential comprehension and a weak negative association with evaluative comprehension; no significant relationship appeared with literal comprehension. The positive overall relationship confirms that higher critical thinking readiness tends to accompany better construction of meaning from text, particularly at the inferential level. The differential pattern across comprehension domains is consistent with Kahneman's Dual Process Theory (2011), Stanovich (1986), and Perfetti's Verbal Efficiency Theory (1985): literal processing may rely more on automatic lower-level skills, whereas inference and evaluation engage deliberate higher-order resources that overlap with critical thinking. The weak magnitude and the negative evaluative correlation further indicate that students' critical thinking strengths have not yet been fully transferred to evaluative reading tasks, reinforcing the need for explicit instructional bridging between the two constructs.

4. Conclusion & Recommendations

The study found that Junior High School students at Taway National High School demonstrated a high level of critical thinking skills across the six domains of Bloom's Revised Taxonomy yet performed at a developing level of reading comprehension, with the majority classified at beginning or developing proficiency and evaluative comprehension recording the lowest performance. Most selected demographic and reading-related profile variables showed no significant differences in either variable, although grade level, reading engagement, and

parental involvement produced significant differences in selected aspects. A statistically significant positive relationship existed between critical thinking skills and reading comprehension, indicating that higher critical thinking readiness was associated with higher overall reading comprehension. These findings directly informed the development of the THINK-READ Instructional Enhancement Program designed to bridge the identified gap through guided reading, higher-order questioning, metacognitive strategies, collaborative activities, and parent engagement.

Learners should deliberately practice critical reading strategies such as questioning, analyzing, synthesizing, and evaluating texts while diversifying materials and engaging in peer discussion. Teachers should systematically integrate higher-order thinking skills into reading instruction through open-ended questioning, Socratic seminars, text analysis, and differentiated guided reading, with particular emphasis on evaluative comprehension. School administrators should support structured reading intervention programs, provide appropriate materials, and sustain professional development focused on research-based literacy and critical-thinking strategies. Master teachers and English department heads should lead the design of integrated instructional materials, mentoring, and co-curricular literacy activities such as reading clubs. Curriculum planners and DepEd officials should embed higher-order and evaluative reading tasks across subject areas and align policies with evidence-based literacy frameworks. Parents should engage in regular, discussion-rich home reading sessions and monitor reading habits. Future researchers are encouraged to examine additional mediating variables and broader populations using experimental or longitudinal designs, while textbook writers should incorporate richer higher-order tasks grounded in Bloom's Revised Taxonomy and reader-response principles.

5. Compliance with ethical standards

The study adhered to applicable ethical standards for research involving human participants. Participation was voluntary, and informed consent was obtained from the participants and/or their authorized representatives. The participants' privacy, confidentiality, and anonymity were protected throughout the study. Data were collected and used solely for academic and research purposes, and participants were informed of their right to withdraw from the study without penalty. The researchers also secured the necessary permission from the concerned school authorities before conducting the study.

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