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Digital Distraction and Study Habits as Predictors of Critical Thinking Skills in English Among Grade 7 Learners of Bigaan National High School, Division of Surigao del Sur: A Predictive-Correlational Study

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ABSTRACT

This quantitative predictive-correlational study determined whether digital distraction and study habits were associated with and jointly predicted critical thinking skills in English among Grade 7 learners of Bigaan National High School, Division of Surigao del Sur. Thirty-six learners with complete and valid responses participated through purposive selection of the grade level followed by an attempt at total enumeration. Digital distraction and study habits were measured through an adapted and contextualized Digital Distraction and Study Habits Questionnaire, while critical thinking was assessed using a researcher-made Grade 7 English Critical Thinking Skills Test. Weighted means, standard deviations, rank ordering, frequency and percentage distributions, Pearson product-moment correlations, and multiple linear regression were used. Digital distraction was very high, while study habits were moderate. The mean critical thinking score was 21.0286 out of 50 (42.06%), with performance concentrated in the Developing and Beginning levels. Digital distraction was significantly and negatively related to critical thinking, whereas study habits were significantly and positively related to critical thinking. The combined regression model was significant, $F(2, 32) = 10.12$, $p = 0.000393$, explaining 38.75% of the variance in critical thinking scores ($R^2 = 0.3875$). The findings indicate that managing digital distraction and strengthening structured study routines are relevant school-based directions for supporting higher-order English reasoning.

Keywords: *critical thinking, digital distraction, English learning, Grade 7 learners, predictive-correlational, study habits*

INTRODUCTION

Critical thinking in English requires learners to move beyond literal comprehension toward analysis, inference, evaluation, and evidence-based justification. These higher-order processes are especially important for Grade 7 learners who are transitioning to more complex reading and performance tasks. International literacy frameworks similarly emphasize evaluating and reflecting on information as advanced reading competencies, while Philippine assessment results show persistent difficulty in reading tasks that require interpretation and judgment (Department of Education [DepEd], 2019; OECD, 2019; OECD, 2023).

At the same time, learners now study in environments characterized by continuous access to smartphones, notifications, social media, games, and other digital stimuli. Research increasingly distinguishes general technology use from learning-specific digital distraction, particularly off-task phone use, notification-driven

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checking, and multitasking during schoolwork. These behaviors may fragment attention and reduce the cognitive resources available for comprehension and reasoning, especially when learners must sustain focus on text-based tasks (Kuş, 2025; Martin et al., 2025; Pyhältö et al., 2025).

Study habits represent a second modifiable learner factor. Time management, organized study environments, strategic review, responsible task completion, and test preparation can structure learners' engagement with academic material and support self-regulated learning. Research on study behaviors suggests that effective routines are positively associated with performance because they increase productive time-on-task, promote monitoring, and strengthen deliberate practice (Panadero, 2017; Walck-Shannon et al., 2021).

The local need is therefore to determine whether these two modifiable factors help explain differences in a specific higher-order English outcome. Although digital distraction and study habits have frequently been examined in relation to general achievement, the thesis identified limited predictive-correlational evidence modeling both variables simultaneously against a performance-based measure of critical thinking in English among early secondary learners. Accordingly, the study examined the levels of digital distraction, study habits, and critical thinking skills in English among Grade 7 learners of Bigaan National High School; tested the relationships among the variables; and determined the joint predictive contribution of digital distraction and study habits to critical thinking performance.

Literature Review

Digital Distraction and Attention During Learning

Digital distraction refers to repeated attention shifts from academic tasks toward non-academic digital activity. In school settings, it is most visible through off-task phone use, notification- or urge-driven checking, multitasking, and difficulty controlling attention during study. Adolescent research has operationalized these behaviors through technology-use and problematic smartphone-use indicators because they capture task interruption, habitual checking, and interference with schoolwork (Kwon et al., 2013; Rosen et al., 2013).

Cognitive explanations clarify why these behaviors may undermine learning. Limited-capacity perspectives hold that attention and working memory are finite; when learners allocate resources to irrelevant digital stimuli, fewer resources remain for comprehension and reasoning. Cognitive Load Theory therefore frames nonessential digital interruptions as extraneous load, while media multitasking research shows that frequent task switching is associated with greater susceptibility to interference (Kahneman, 1973; Sweller, 1988; Ophir et al., 2009).

Recent empirical work generally reports negative associations between learning-specific digital distraction and school outcomes. Systematic reviews indicate that off-task smartphone and social media use is commonly related to weaker academic performance, while adolescent studies show that digital activities can reduce schoolwork time and effort (Martin et al., 2025; Mayen et al., 2025; Pyhältö et al., 2025). Philippine evidence also documents high levels of problematic smartphone engagement among adolescents and associations with school-related functioning, supporting the relevance of examining distraction among Filipino learners (Buctot et al., 2020).

Study Habits and Self-Regulated Learning

Study habits are recurring behaviors that organize how learners manage academic demands. In the thesis, the construct includes time management and planning, study environment and readiness, study strategies and review, task completion and responsibility, and test preparation practices. These domains correspond with common study-habit inventories and with self-regulated learning perspectives that view planning, monitoring, strategy use, and behavioral control as central to effective learning (Palsane & Sharma, 1989; Panadero, 2017).

Strong study routines can increase productive time-on-task and reduce procrastination. Planning enables learners to distribute work across available time, while a prepared study environment can protect concentration

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from competing stimuli. Strategy-based behaviors such as note-taking, summarizing, spaced review, and self-checking can deepen processing by requiring learners to reorganize information and monitor understanding. Evidence on study habits and learning strategies generally shows positive relationships with academic outcomes, although the strength of the relationship depends on the quality rather than simply the amount of study (Valente et al., 2024; Walck-Shannon et al., 2021).

The relevance of study habits to critical thinking is especially clear when English tasks require learners to justify interpretations and connect claims to evidence. Consistent routines create repeated opportunities to read, review, monitor comprehension, and revise reasoning. Research on self-regulated learning and critical reading supports the view that structured learning behaviors can contribute to higher-order performance, providing a rationale for treating study habits as a positive predictor of critical thinking in English (Panadero, 2017; Zimmerman, 2002).

Critical Thinking Skills in English

Critical thinking is commonly defined as a set of teachable cognitive skills involving interpretation, analysis, inference, evaluation, explanation, and self-regulation. Facione's Delphi framework positions these skills as assessable competencies rather than fixed traits, while Bloom's revised taxonomy similarly distinguishes analysis and evaluation as higher-order cognitive processes (Anderson & Krathwohl, 2001; Facione, 1990).

Within English learning, critical thinking becomes visible when learners infer implicit meaning, assess claims and evidence, judge the credibility or quality of information, and construct defensible conclusions. Reading literacy frameworks emphasize evaluate-and-reflect processes that closely correspond with these demands (DepEd, 2019; OECD, 2019). Performance-based reading tasks are therefore appropriate for assessing critical thinking when they require interpretation, inference, evaluation, and evidence-based justification rather than simple recall.

Philippine and international assessment evidence reinforces the need to strengthen such skills. Philippine learners have performed below OECD averages in reading, with very few reaching the highest proficiency levels that require complex evaluation of texts (DepEd, 2019; OECD, 2023). The issue is therefore not merely reading fluency but the ability to use language for reasoning, evaluation, and judgment, making school-based investigation of predictors of critical thinking educationally significant.

Relationships Among Digital Distraction, Study Habits, and Critical Thinking

The expected relationship between digital distraction and critical thinking is negative because critical English tasks depend on sustained attention and working-memory resources. Frequent interruptions can fragment reading, weaken goal maintenance, and reduce the depth of processing available for inference and evaluation. Reviews and adolescent studies generally support this mechanism, especially when distraction is measured as task-interfering phone use rather than broad screen time (Martin et al., 2025; Mayen et al., 2025; Pyhältö et al., 2025).

In contrast, study habits are expected to relate positively to critical thinking because planning, review, monitoring, and responsible task completion support repeated engagement with reasoning tasks. Self-Regulated Learning Theory proposes that learners who plan and monitor their behavior are better positioned to sustain effort and select appropriate strategies. Metacognitive processes further support checking comprehension, revising conclusions, and evaluating whether evidence supports a response (Flavell, 1979; Panadero, 2017; Zimmerman, 2002).

The thesis therefore treated digital distraction and study habits as simultaneous, modifiable predictors. This combined model is practically important because school interventions can both reduce learning-specific digital interruptions and strengthen productive study routines. Examining their unique and joint contribution to critical thinking can identify whether protected attention and structured learning behavior together explain meaningful variation in English reasoning performance.

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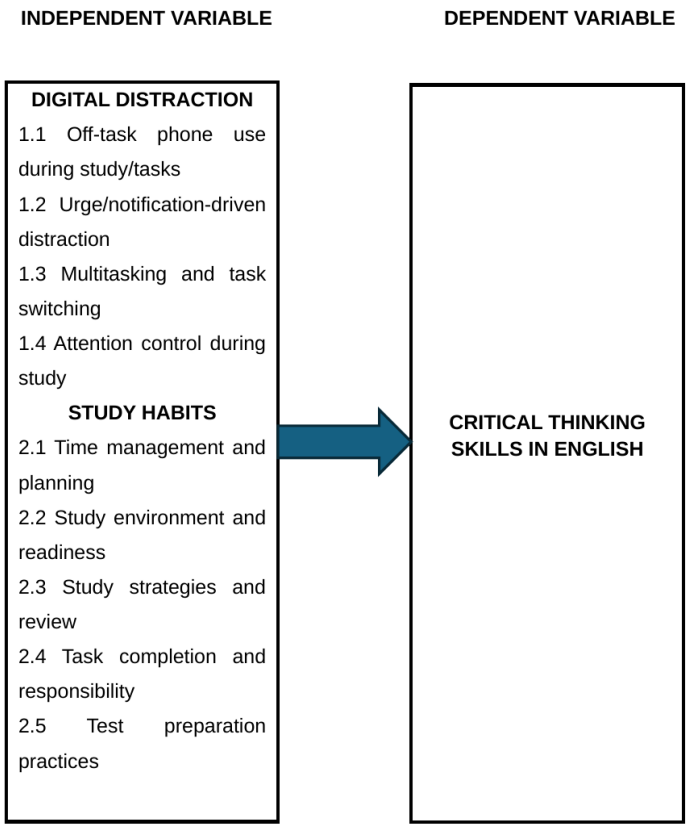
Theoretical and Conceptual Framework

Cognitive Load Theory provided the principal explanation for the digital distraction pathway. Because working memory has limited capacity, off-task phone use, notifications, and multitasking can increase extraneous processing demands and reduce the resources available for deep reading, inference, and evaluation (Sweller, 1988). The framework therefore supports an expected inverse relationship between digital distraction and critical thinking performance.

Self-Regulated Learning Theory explained study habits as behavioral expressions of planning, monitoring, and regulation toward academic goals (Zimmerman, 2002). Metacognition Theory complemented this explanation by emphasizing awareness and control of one's thinking, including recognizing confusion, checking interpretations, and revising conclusions (Flavell, 1979). Together, these perspectives support the expectation that stronger study habits facilitate the monitoring and strategic engagement required for higher-order English tasks.

The conceptual model accordingly positioned digital distraction and study habits as independent variables and critical thinking skills in English as the dependent variable. Digital distraction was represented by off-task phone use, urge/notification-driven distraction, multitasking and task switching, and attention control during study; study habits were represented by time management and planning, study environment and readiness, study strategies and review, task completion and responsibility, and test preparation practices. The original schematic diagram from the thesis is retained below.



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METHODS

Research Design

The study used a quantitative predictive-correlational design. Digital distraction and study habits served as predictor variables, while critical thinking skills in English served as the outcome variable. The design was used to describe the measured levels of the variables, estimate their bivariate relationships, and determine the combined predictive contribution of the two learner factors through multiple linear regression. No variable was experimentally manipulated.

Research Locale

The study was conducted at Bigaan National High School in Barangay Bigaan, Municipality of Hinatuan, Province of Surigao del Sur, Caraga Region (Region XIII), during School Year 2025–2026. The school is a public secondary school under the Department of Education Schools Division of Surigao del Sur and served as the site for administration of the learner questionnaire and English critical thinking assessment.

Participants and Sampling Technique

The respondents were Grade 7 learners officially enrolled at Bigaan National High School during School Year 2025–2026. The final dataset contained 36 learners with complete and valid responses. The grade level was selected purposively because it directly matched the intended outcome measure, after which an attempt at total enumeration was made by inviting all available Grade 7 learners to participate.

Learners were included when they were officially enrolled in Grade 7, present during administration, voluntarily participated with the required consent and assent, and completed all study instruments. Incomplete questionnaires or missing test results were excluded from the final analysis.

Research Instrument

The study measured the three major variable domains through two instrument packages. The Digital Distraction and Study Habits Questionnaire (DDSHQ) was an adapted and contextualized 36-item learner questionnaire. Part A contained 16 digital-distraction items across four dimensions, and Part B contained 20 study-habit items across five dimensions. Responses used a four-point Likert scale from 4 (Strongly Agree) to 1 (Strongly Disagree); attention-control items were reverse scored as specified in the thesis.

The digital-distraction items were conceptually patterned from the Smartphone Addiction Scale–Short Version and the Media and Technology Usage and Attitudes Scale, while the study-habit items were patterned from domains in the Palsane and Sharma Study Habit Inventory (Kwon et al., 2013; Palsane & Sharma, 1989; Rosen et al., 2013). Critical thinking was measured using a researcher-made Grade 7 English Critical Thinking Skills Test containing a reading passage followed by multiple-choice and constructed-response items assessing interpretation, inference, evaluation, and evidence-based justification. Expert validators reviewed the clarity, language, relevance, and alignment of the tools, and internal consistency of the questionnaire scales was assessed using Cronbach's alpha before final analysis.

Data Gathering Procedure

Before data collection, permission was secured from the Schools Division Superintendent and coordination was undertaken with the school head. The researcher finalized the validated questionnaire and critical thinking test and prepared parent consent forms, learner assent forms, administration instructions, coding procedures, and confidentiality guidelines. Data collection was conducted on scheduled dates within the school premises after parental consent and learner assent were obtained.

Respondents were oriented on the study purpose, voluntary participation, confidentiality, and the proper completion of the instruments. Learners answered the questionnaire using the four-point scale and completed the critical thinking test individually within the allotted time. Completed materials were checked for completeness

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and coded using respondent numbers rather than names. Data were then encoded in the automated scoring workbook, cleaned for incomplete or inconsistent entries, and prepared for analysis.

Data Analysis

Weighted means, standard deviations, and rank ordering described digital distraction and study habits. Mean scores, standard deviations, frequencies, and percentages described critical thinking performance and proficiency classifications. Pearson product-moment correlation was used to determine the direction and strength of the relationships between digital distraction and critical thinking and between study habits and critical thinking at the 0.05 level of significance. Multiple linear regression determined whether the two predictors, entered together, significantly predicted critical thinking skills in English and quantified the variance explained by the model.

Ethical Consideration

The study incorporated parental consent and learner assent because the respondents were Grade 7 learners. Participation was explained as voluntary, and respondents were informed about the purpose of the study and the confidentiality of their responses before administration. Identifying names were replaced with respondent codes during data handling, and only complete and valid records were retained for the statistical analysis. These procedures were used to protect participant privacy and minimize undue influence during instrument administration.

RESULTS AND DISCUSSION

Level of Digital Distraction

Digital distraction among the 36 Grade 7 learners was Very High overall (M = 3.2875, SD = 0.3245). Off-task phone use during study/tasks obtained the highest mean (M = 3.5857, SD = 0.4655), followed by urge/notification-driven distraction (M = 3.5286, SD = 0.4446). Multitasking and task switching was High (M = 3.1429, SD = 0.2862), while attention control during study was the lowest dimension but remained High (M = 2.8929, SD = 0.4426). The pattern indicates that phone-related interruptions and checking behaviors were common during study tasks, consistent with evidence that learning-specific digital distractions reduce sustained task focus (Martin et al., 2025; Pyhältö et al., 2025).

Table 1. *Summary of Digital Distraction Levels (n = 36)*

Dimension	Mean	SD	Interpretation	Rank
Off-task phone use during study/tasks	3.5857	0.4655	Very High	1
Urge/notification-driven distraction	3.5286	0.4446	Very High	2
Multitasking and task switching	3.1429	0.2862	High	3
Attention control during study	2.8929	0.4426	High	4
Overall	3.2875	0.3245	Very High	—

Level of Study Habits

Study habits were Moderate overall (M = 2.1200, SD = 0.7093). Task completion and responsibility ranked highest (M = 2.2214, SD = 0.7688), followed by study environment and readiness (M = 2.1786, SD = 0.7872) and study strategies and review (M = 2.1357, SD = 0.6707). Test preparation practices had a mean of 2.0714 (SD = 0.8566), while time management and planning ranked lowest (M = 1.9929, SD = 0.6431). The results suggest that learners were more consistent in completing required tasks than in organizing study time, supporting the importance of planning and self-regulation for sustained learning (Panadero, 2017; Walck-Shannon et al., 2021).

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Table 2. *Summary of Study Habits Levels (n = 36)*

Dimension	Mean	SD	Interpretation	Rank
Time management and planning	1.9929	0.6431	Moderate	5
Study environment and readiness	2.1786	0.7872	Moderate	2
Study strategies and review	2.1357	0.6707	Moderate	3
Task completion and responsibility	2.2214	0.7688	Moderate	1
Test preparation practices	2.0714	0.8566	Moderate	4
Overall	2.1200	0.7093	Moderate	—

Critical Thinking Skills in English

The mean critical thinking score was 21.0286 out of 50 (SD = 10.7942), equivalent to a mean percentage score of 42.06% (SD = 21.59). The largest reported proficiency group was Developing (f = 15, 42.9%), followed by Beginning (f = 9, 25.7%), Approaching Proficiency (f = 7, 20.0%), and Proficient (f = 4, 11.4%); no learner was reported at the Advanced level. These results indicate substantial difficulty with inference, evaluation, and evidence-based justification, consistent with the higher-order demands described by critical thinking and reading literacy frameworks (Facione, 1990; OECD, 2019).

Table 3. *Critical Thinking Skills in English*

Measure / Level	Value	Reported Percentage
Mean total score (0–50)	21.0286	—
Mean percentage score	42.06%	—
Advanced	0	0.0%
Proficient	4	11.4%
Approaching Proficiency	7	20.0%
Developing	15	42.9%
Beginning	9	25.7%

Relationships With Critical Thinking Skills in English

Digital distraction had a statistically significant moderate negative relationship with critical thinking skills in English ($r = -0.5590$, $p = 0.000482$). Learners reporting greater digital distraction tended to obtain lower critical thinking scores. This pattern is theoretically consistent with Cognitive Load Theory and with empirical evidence showing that task-interfering phone use and multitasking can reduce sustained attention and schoolwork engagement (Sweller, 1988; Martin et al., 2025; Pyhältö et al., 2025).

Study habits had a statistically significant moderate positive relationship with critical thinking skills in English ($r = 0.5804$, $p = 0.000257$). Learners with stronger reported study habits tended to achieve higher critical thinking scores, consistent with Self-Regulated Learning Theory and evidence that planning, monitoring, and strategy-based routines support learning performance (Panadero, 2017; Walck-Shannon et al., 2021; Zimmerman, 2002).

Table 4. *Correlations Between Predictors and Critical Thinking Skills in English*

Variable Pair	r	p	Decision at .05
Digital Distraction – Critical Thinking	-0.5590	0.000482	Reject H_0
Study Habits – Critical Thinking	0.5804	0.000257	Reject H_0

Combined Prediction of Critical Thinking Skills

Multiple linear regression showed that digital distraction and study habits jointly formed a statistically significant predictive model, $F(2, 32) = 10.12$, $p = 0.000393$. The model explained 38.75% of the variance in critical thinking scores ($R^2 = 0.3875$; adjusted $R^2 = 0.3492$). In the combined model, digital distraction showed a negative standardized effect ($\beta = -0.3063$, $p = 0.114$), whereas study habits showed a positive standardized effect ($\beta = 0.3726$, $p = 0.056$). Thus, neither predictor reached the .05 level for a unique contribution when entered simultaneously, but the overall model was significant.

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The pattern indicates that protected cognitive attention and structured learning routines operate together in explaining critical thinking performance. Digital distraction may reduce the cognitive resources available for reasoning, while study habits may support planning and monitoring processes required for complex English tasks (Sweller, 1988; Zimmerman, 2002). Because the predictors were correlated with the outcome in opposite directions and jointly explained meaningful variance, school interventions may need to address both digital discipline and study-routine development rather than treating either factor in isolation.

Table 5. *Multiple Regression Predicting Critical Thinking Skills in English*

Predictor	B	SE B	t	p	β
Constant	42.4999	25.1537	1.690	0.101	—
Digital Distraction Mean	-10.1882	6.2634	-1.627	0.114	-0.3063
Study Habits Mean	5.6709	2.8652	1.979	0.056	0.3726

Note. Dependent variable: Critical Thinking Skills in English (CT Total Score). Model fit: $R^2 = 0.3875$, adjusted $R^2 = 0.3492$; $F(2, 32) = 10.12$, $p = 0.000393$.

CONCLUSION

Grade 7 learners in the study exhibited very high digital distraction, moderate study habits, and generally low-to-developing critical thinking performance in English. Off-task phone use and notification-driven interruption were the most prominent forms of distraction, while time management and planning represented the weakest study-habit area. The findings therefore describe a learning context in which frequent digital interruption coexists with only moderately established study routines and difficulty in higher-order English reasoning.

Digital distraction was significantly and negatively associated with critical thinking, whereas study habits were significantly and positively associated with critical thinking. Taken together, the two predictors formed a significant regression model that explained 38.75% of the variance in critical thinking scores, although their unique regression coefficients did not individually reach the .05 level when entered simultaneously. The study therefore supports the conclusion that digital distraction and study habits are meaningful school-relevant factors that should be considered jointly when designing supports for critical thinking in English.

Recommendation

Bigaan National High School and comparable schools may strengthen classroom and study-time digital management routines, including clear expectations for device use during English tasks and learner guidance on notification control, scheduled checking, and device-free study blocks. Parents and guardians may reinforce consistent at-home routines that protect homework and reading time from avoidable digital interruptions. These measures should emphasize self-management rather than technology prohibition alone.

English teachers may explicitly teach study planning and higher-order reading routines because time management was the weakest study-habit dimension and critical thinking performance was concentrated in the Developing and Beginning levels. Weekly study schedules, checklists, spaced review, summarizing, self-checking, inference exercises, evaluation of claims, and evidence-based justification tasks may be integrated into Grade 7 English instruction. Future studies should use larger, multi-school samples; include additional variables such as reading comprehension, vocabulary, English self-efficacy, and home learning environment; and test structured digital-distraction and study-habit interventions using longitudinal or experimental designs.

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