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Research Article

Critical Thinking Disposition, Critical Thinking Skills, and Academic Performance of Prospective Social Studies Teachers: A Mediation Analysis

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ABSTRACT

Critical thinking is necessary among prospective social studies teachers so they can cultivate similar ability among their students. The critical thinking disposition motivates individuals to use their critical thinking skills, enabling them to make reasoned decisions or achieve outcomes. However, the influence of critical thinking disposition and skills on academic performance remains underexplored, particularly in Social Studies. Determining the critical thinking levels of prospective teachers and their academic performance is imperative to provide insights into the status of critical thinking among them. How they leverage the ability to achieve academic success indicates the application and development of critical thinking in the Social Studies program. Using a quantitative explanatory design, this study examined the effect of critical thinking disposition on the academic performance of prospective Social Studies teachers using critical thinking skills as a mediating variable. It employed total population sampling and involved 126 prospective Social Studies teachers enrolled at a comprehensive State University in the Philippines during the 1st Semester of AY 2025-2026. Adopted questionnaires on critical thinking disposition and skills were used as data collection tools. Frequency, mean, and standard deviation were used to describe academic performance, critical thinking disposition, and skills, while mediation analysis examined the relationships among variables. Findings revealed that Social Studies students demonstrate strong critical thinking disposition and skills, as well as above-average academic performance. It concluded that although critical thinking skill is inversely associated with students' achievement, critical thinking disposition is a strong predictor of academic performance. Designing assessments and instructional activities that develop both dimensions among prospective teachers is strongly recommended.

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Introduction

Today's information society requires individuals who can analyze, critique, and know the what, why, and how of learning. It expects individuals to actively participate in the learning process, synthesize and produce new information, rather than accept information at their face value and without questioning (Ozturk, 2022). Thus, the goal of education is to develop critical thinkers who can effectively participate in social, political, and economic reforms rather than mere followers. However, the students need teachers' guidance and assistance in cultivating it. Teachers must possess this ability in order to develop similar skills among students (Facione et al., 1997; Gedik, 2013; Onal, 2025).

Critical thinking is a relevant 21st-century thinking skill that must be developed among prospective social studies teachers (Huang & Sang, 2023) to achieve the goals of Social Studies. Prospective teachers should be capable of perceiving socio-scientific issues, understanding the context, and providing solutions making it imperative to educate them on how to use critical thinking. They should know how to accurately attain information and how to transfer it to their students (Palavan, 2020). As future teachers, they will gain from this as it will help them better understand the students' learning needs, choose appropriate content and materials (Yurt, 2023), and develop their cognitive abilities (Onal, 2025; Yurt, 2023). Since they are expected to train their students to think critically (UNESCO, 2023), developing critical thinking among prospective teachers enables them to design activities and assessments that will harness their students' thought processes. The prospective teachers' critical thinking levels will play a key role in determining the extent to which their students will develop these skills in the future (Ozturk, 2022).

Critical thinking (CT) is a higher-order and self-directed mental activity aimed at providing reasoned solutions to problems. It requires the individual's initiative to actively analyze situations, gather evidence, think rationally, and make informed decisions (Facione, 1990;

Palavan, 2020; Uslu, 2020; Taştı & Yıldırım, 2022). It urges the thinker to seek more information and look behind the scenes to uncover the truth (Taştı & Yıldırım, 2022). It requires openness to different perspectives and accommodates evidence-based insights and ideas (Ennis, 1993; Palavan, 2020; Uslu, 2020) after a purposeful and reflective judgment of applied standards and criteria of what is being examined (Yurt, 2023).

Based on Facione's Critical Thinking Model, CT has two distinct dimensions- the disposition and the skills (Facione, 1990). The critical thinking disposition (CTD) refers to the person's tendency, inclination, or attitude toward critical thinking skills (Facione, 1990; Gedik, 2013). It refers to the consistent internal motivation to engage in problem-solving and decision-making. It is the habit of the mind to use its thinking in resolving challenges and the inclination to make good judgments based on reasoned consideration of evidence (Facione, 1990; Facione et. al., 1997; Yurt, 2023). CTD capacitates thinkers to analyze objectively and make well-thought-out decisions, enabling them to solve problems with more autonomy and apply critical thinking in various contexts (Martinez-Huaman et al., 2025).

On the other hand, critical thinking skills (CTS) refer to the concrete use of analysis, interpretation, evaluation, inference, explanation, and self-regulation (Facione, 1990; Gedik, 2013) in examining the situation, weighing the pros and cons, and looking at problems at various angles. It is an act of perceiving events in a multifaceted manner, examining them rationally, and understanding the cause-and-effect relationship in every situation in a time-consuming process. It enables students to think logically, make impartial decisions based on well-defined criteria, and draw conclusions from solid evidence (Palavan, 2020).

However, having CTS alone is not sufficient to achieve a certain outcome. A person may have CTS, but without CTD, he may not be willing to use it (Gedik, 2013). CTD induces the thinker to engage in CTS to achieve an outcome.

In education, it prompts a person to critically analyze the learning materials, evaluate information, dedicate themselves to their tasks, and engage with the learning content, thereby becoming more successful learners (Orhan, 2022). Consequently, CTD and CTS are vital for academic success because they enable students to achieve their academic goals (Orhan, 2022; Yilmaz & Salman, 2022).

The use of CTD and CTS is reflected in the academic performance, which is the culmination of a student's accomplishments in an educational institution. It serves as the measure of the student's learning, and describes the skills and abilities they have learned (Kanwal & Butt, 2021). It also describes how much students have achieved the program's academic goals (Kanwal & Butt, 2021; Karagöl, & Bekmezci, 2015) and serves as the final outcome for students after admission to higher education (Karagöl & Bekmezci, 2015). Academic performance offers evidence for changed behaviors and accomplished goals and provides feedback on the quality of training and instruction in the college. It reflects the students' achieved outcomes (Kesim & Gul, 2015) and predicts an individual's personal success (Ali & Awan, 2021).

Despite the abundance of CT studies in the literature, critical thinking in teacher education receives little attention (Huang & Sang, 2023), especially in the Philippines. Reviewed literature revealed that most studies assessing CTD and CTS as predictors of academic achievement in teacher education were conducted in Turkey (Bakir, 2015; Gedik, 2013; Karagöl, & Bekmezci, 2015; Kir & Cimer., 2023; Kuscu & Erdoğan, 2024; Meral et. al, 2021; Onal, 2025; Orakcı & Khalili, 2024; Ozturk, 2022; Palavan, 2020; Salman & Senel, 2024; Uslu, 2020; Taştı & Yildirim, 2022; Yilmaz & Salman, 2022; Yurt, 2023,2025), Indonesia (Saputri et. al., 2020; Verawati et al., 2024), Pakistan (Ali & Awan, 2021; Kanwal & Butt, 2021), Nigeria (Amuda et. al., 2022), Japan (Sireerat et al., 2022), Spain (Alvarez-Huerta et. al., 2023), Asia-Pacific (Orhan, 2022) and Philippines (Salviejo et. al., 2024). Moreover, CT research in Social Studies is scarce. Available literature focused on a single-dimensional analysis of CT, examining either CTD (Bakir, 2015; Uslu, 2020) or CTS (Gedrik, 2013) of social studies students. In

addition, while literature posits that CTD is the attitudinal component affecting CTS, CTD and CTS were treated either as co-predictors of academic performance (Taştı & Yildirim, 2022), as mediators of thinking-based instruction (Ali & Awan, 2021), or CTS as a predictor of CTD (Kuscu & Erdoğan, 2024). The influence that CTD has on certain outcomes like academic performance through the use of CTS remains an underexplored area, especially in Social Studies.

Consequently, this study analyzes the effect of CTD on the academic performance of Social Studies students while using CTS as the mediating variable. Data about the students' level of disposition toward critical thinking, their skills level, and academic performance are gathered not only to provide insights into the current status of CT among students, but also to identify the gaps in the CT application and development in the program. Since the students' ability to use CT in improving their performance signifies their ability to employ CT to achieve other goals, determining the interaction between CTD, CTS and academic performance will give the college valuable insights on how to assist and guide the students to become critical thinkers. The results will also reflect the quality of instruction and assessment practices in the college, which can serve as a basis for improving the teaching and learning process to make it more targeted and strategic for developing CT as a core skill. Furthermore, the study will contribute to the limited body of knowledge on CT, providing empirical data on CTD as a precursor to CTS. It will also provide evidentiary support for existing studies on the role of CTD in academic performance, offering insights into the relevance of the instructional and assessment practices in the development of this cognitive ability.

Conceptual Framework

According to Sosu (2013), disposition must be used along with cognitive ability to affect change. This study examined the effect of critical thinking disposition on academic performance as mediated by critical thinking skills. It adopted the single mediator model by Mckinnon (2012) as the study's framework (Figure 1).

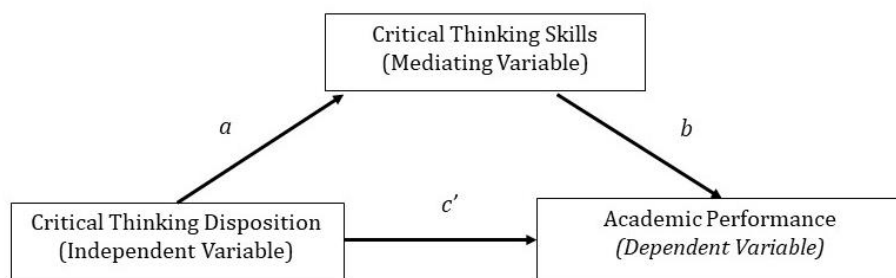


Figure 1. Research Paradigm

In this study, the critical thinking disposition is the independent variable, the critical thinking skills are the mediating variable, while academic performance is the dependent variable. The CTD predicts a person's CTS (path a) and in turn CTS affects academic performance while accounting for the CTD (path b). Path c' determines the effect of CTD on academic performance, while controlling for CTS. With these paths, standardized path coefficients and effects (direct, indirect, and total) will be analyzed to assess the relationship among the variables.

Research Hypothesis

The following were the hypotheses of the study:

- H₁: CTD significantly predicts CTS.
- H₂: CTS significantly predicts academic performance while controlling for CTD.
- H₃: CTS significantly mediates the relationship between CTD and academic performance.
- H₄: CTD significantly predicts academic performance while controlling for CTS.

Materials and Methods

Research Design

The study used a quantitative explanatory design (Firdaus et. al., 2025) to examine the effect of critical thinking disposition on the academic performance of Social Studies students while determining the influence of critical thinking skills as a mediating variable.

Respondents

The participants included 126 junior and senior Social Studies students from an extension campus of Batangas State University TNEU. They comprised 20 males (P=15.87) and 106 females (P=84.13) who were enrolled in the Bachelor of Secondary Education major in Social Studies program during the 1st Semester, AY 2025-2026. The total population of junior and senior Social Studies students was 135, but four respondents declined to participate, leaving 131 participants. Of these, five questionnaires were removed due to incomplete answers or straight-line responses.

In selecting the respondents, only those students who have complied with the university's two-year residence requirement were included in the study. This ensures that they have been integrated into the academic and social environments and have developed the cognitive abilities and academic skills to persist and complete the program (Tinto, 2015). Thus, first-year and second-year students were excluded from the study. Since the number of participants with the set of characteristics (LAERD, 2012) is relatively small (Revesencio, 2022), total population sampling was utilized. The profile of the respondents regarding sex and year level is indicated in Table 1.

Table 1. Distribution of the Respondents

		Sex				Total
		Male (F)	P	Female (F)	P	
Year Level	3rd Year	9	7.14	54	42.86	63
	4th year	11	8.73	52	41.27	63
Total		20	15.87	106	84.13	126

Research Instrument

Two adopted questionnaires were used as the primary data collection instruments in the study. These were the Critical Thinking Disposition Scale (CTDS; Sosu, 2013) and the Critical Thinking Questionnaire (CTQ; Kobylarek et al., 2022). The CTDS measures disposition toward critical openness (7 items) and reflective skepticism (4 items) with a total of 11 items. A Likert scale of 1 to 5, ranging from strongly disagree to strongly agree, is used to score the items. The level of critical thinking disposition is determined by adding the scores in all items which ranges from 11 to 55. Low disposition is indicated by a score of 11-34, moderate disposition with 35 – 44, and high disposition with 45-55. The consistency coefficient of the CTDS in the sample is $\alpha = 0.867$, signifying the instrument's acceptability.

Regarding the CTQ, the tool consists of 25 items which assess the critical thinking skills (CTS) as integrated at Bloom's levels of cognitive domain, namely, remembering, understanding, applying, analyzing, evaluating, and creating. Four items were reverse-coded, as suggested by the author, to ensure consistency of the results. These items include "In-depth analyses of reality are a waste of life", "Everything already exists, so nothing completely new can be created", "I do not remember much from what I was learning at school", and "I have difficulties with paraphrasing." A Likert scale of 1 to 5, ranging from strongly disagree to strongly agree, is used to score the items. The overall critical thinking skills is measured by summing the scores in all items which ranges from 25-125. Low CTS has a score of 25-25, average with 59-92, and high with 93-125. The internal consistency of the test using the sample is $\alpha = 0.899$, signifying the tool's acceptability. In terms of academic performance, each student was asked to provide their overall general weighted average (GWA) indicated in their student portal.

Data Gathering Procedure

The author sought approval from the respondents through a consent form that contained the purpose of the study and its direction. It also explained that participation is voluntary and participants can decline to join the

survey at any time. It also emphasized that personal information and identifiers collected would be used solely to validate their GWA, and that all their responses would be handled confidentially.

The questionnaire was administered over two days due to the availability of the respondents. The survey tool was provided to the respondents during their downtime, and they were given ample time to complete it. It took 5-7 minutes for each respondent to complete the questionnaires. Four respondents did not provide information on their academic performance, while one respondent assigned all items a score of 1, indicating an insufficient effort in answering the items. Thus, these questionnaires were excluded from the study. After data validation and cleaning, all information was tabulated and statistically treated using statistical software. Hard copies of the survey tool were shredded before disposal, while electronic copies were encrypted.

Statistical Analysis

Frequency (F) and percentage (P) were used to describe the respondents and their academic performance, which were computed in MS Excel. The mean and standard deviation (SD) of respondents' academic performance, CTD and CTS levels, as well as preliminary analyses such as normality tests and relationships between predictors (CTD and CTS) and GWA, were statistically analyzed using the Jamovi v.2.7.15 statistical software. In addition, the mediation analysis examining the effect of CTD on academic performance with CTS as the mediating variable was conducted using the software's jAMM module (Gallucci, 2019). Percentile bootstrap confidence intervals with 5000 resamples were employed due to their appropriateness in analyzing samples of >50-500 (Fritz, et al., 2012; Creedon & Hayes, 2015; Iguarta & Hayes, 2021).

Result and Discussion Academic Performance

The study determined the academic performance of Social Studies students. As reflected, the university employs reverse scoring, indicating that a lower GWA means better academic performance. Based on the results,

students have good academic performance as evidenced by their mean GWA of 1.95 and SD of 0.29. More than half of the students (60.7%)

have above-average performance, while only a small portion (2.4%) have a fair to satisfactory rating.

Table 2. Academic Performance of Social Studies Students

	F	P
Superior (1.49 - 1.25)	4	3.1
Very Good (1.74 - 1.5)	28	22.2
Good (1.99 - 1.75)	45	35.4
Meritorious (2.24 - 2.0)	23	18.1
Very Satisfactory (2.49 - 2.25)	23	18.1
Satisfactory (2.74 - 2.5)	2	1.6
Fairly Satisfactory (2.99 - 2.75)	1	0.8
Total	126	100.0

Mean GWA = 1.95 (Good); SD = 0.29

The students' good academic standing indicates that the learning outcomes are well-achieved and quality instruction is provided to the learners. Since the university employs an Outcome-based Education, the GWA encompasses all assessments used to evaluate students' performance. It also reflects how much the students have learned from instruction and provides feedback on the quality of education provided by the institution (Kesim & Gül, 2025).

Critical Thinking Disposition and Critical Thinking Skills

Table 3 reveals that students have high levels of CTD (Mean = 48.1; SD = 4.61) and CTS (Mean = 98.0; SD = 10.1), indicating that the respondents were highly motivated to use their critical thinking skills in their studies, and that they also have the concrete ability to do so. The finding is supported by Yilmaz & Salman (2022), who found a high disposition level toward socio-scientific issues among Social

Studies preservice teachers. However, it contrasts with other CT studies, which found that the CTD (Bakir, 2015; Uslu, 2020) and CTS (Gedik, 2013) were low among Turkish Social Studies students. The results may be explained by the different attributes assessed, resulting in the variations in responses. There is a need to identify indicators of critical thinking in order to develop a standardized instrument to measure this cognitive ability (Kuscu & Erdoğan, 2024). Context-specific instrument must be developed (Taştı & Yildirim, 2022) to assess CTD and CTS in Social Studies.

On the other hand, the results also indicate that the social studies program provides activities that challenge students to be critical thinkers (Gedik, 2013), resulting in a high level of dispositions and skills. Since the respondents are in higher year levels, they are expected to have stronger CTDs and CTs as these develop over time (Alvarez-Huerta et. al., 2023; Kuscu & Erdoğan, 2024; Verawati, 2024; Yurt, 2025).

Table 3. CTD and CTS

	N	Mean	SD	Min	Max	Level
CTD	126	48.1	4.67	21.0	55	High
CTS	126	98.7	10.0	47.0	125	High

Note: CTD: Low:11-34; Moderate: 35 – 44; High: 45-55; CTS: Low:25-25; Average:59-92; High: 93-125.

Critical Thinking Disposition, Skills, and Academic Performance Preliminary Analyses

Before conducting mediation analysis, normality assumptions (Abu-bader & Jones, 2021) were tested using skewness, kurtosis, Shapiro-Wilk, and Kolmogorov-Smirnov tests.

Table 4. Test of Normality

	Skewness and Kurtosis			Shapiro – Wilk		Kolmogorov-Smirnov	
	CTS	CTD	GWA	Statistic	p	Statistic	p
Skewness	-0.678	-1.86	0.467	0.980	.063	0.073	.508
Std. error skewness	0.216	0.216	0.216				
Kurtosis	4.96	7.83	-0.236				
Std. error kurtosis	0.428	0.428	0.428				

Note: Significant=* $p < 0.05$; ** $p < 0.01$

Based on the results, the skewness and kurtosis of CTD, CTS, and GWA were all within the acceptable range of -2 and +2 for skewness and -7 and +7 for kurtosis, indicating normality (Hair et. al., 2010; West et. al., 1995). Although there is a slight deviation for CTD's kurtosis

(7.83), the Shapiro-Wilk test ($p > 0.63$) and Kolmogorov-Smirnov ($p = 0.508$) affirmed that there is no significant deviation from normality. Visual inspection of Q-Q and residual plots also indicated that the data are normally distributed.

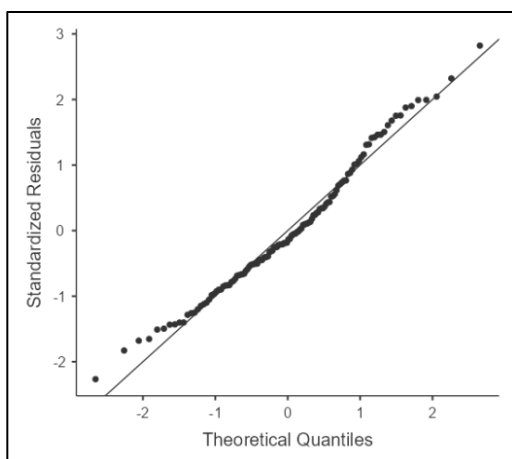


Figure 2. Q-Q Plot

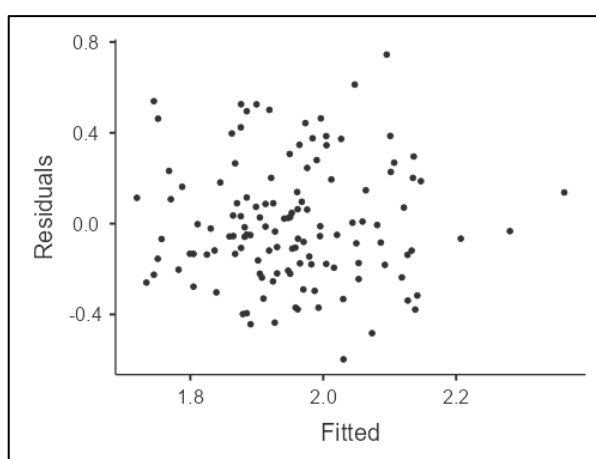


Figure 3. Residual Plot

A linear regression analysis was also conducted to test the relationship among the variables. Based on Table 5, the expected GWA of social studies students is 2.620, assuming that CTD and CTS are both zero. It can be noted that for every increase in CTD, assuming CTS is constant, GWA decreases by 0.031. Meanwhile, for each unit increase in CTS, while CTD is held constant, GWA increases by 0.009. The results also showed a highly significant negative relationship between CTD and GWA ($t = -4.87$;

$p < 0.01$), while a positive significant relationship was found between CTS and GWA ($t = 2.84$; $p = 0.05$). In addition, Table 6 revealed a moderate positive relationship between the predictors (CTD + CTS) and GWA ($r = 0.402$). Although the variables are significantly related, only 16.2% of the variance in GWA is attributable to the predictors, while 83.8% is accounted for by other factors. These results indicate that the model is adequate for mediation analysis.

Table 5. Regression Analysis of CTD and CTS with GWA

Predictor	Estimate (b)	SE	t	p
Intercept	2.620	0.268	9.78	<.001
CTD	-0.031	0.006	-4.87	<.001
CTS	0.009	0.003	2.84	.005

Table 6. Model Fit Measures

Model	R	R ²
1	0.402	0.162

Note. Models estimated using sample size of N=126

Mediation Analysis

A mediation analysis was conducted in Jamovi's jAMM module to examine if CTS

mediated the relationship between CTD and GWA. The standardized paths and effect estimates are indicated in Table 7.

Table 7. Mediation Analysis of CTD, CTS and GWA

Path	b	SE	95% C.I. (LL, UL)	β	z	p
a: CTD→CTS	1.313	0.151	0.819, 1.632	0.612	8.68	<.001**
b: CTS→GWA	0.009	0.003	0.002, 0.014	0.296	2.87	.004**
Indirect Effect (CTD→CTS→GWA)	0.011	0.004	0.003, 0.019	0.181	2.73	.006**
Direct Effect (c): (CTD→GWA)	-0.031	0.006	-0.042, -0.018	-0.508	-4.93	<.001**
Total Effect (c): CTD→GWA	-0.020	0.005	-0.030, -0.010	-0.327	-3.87	<.001**

Note: (a) Confidence intervals computed with method: Bootstrap percentiles with 5000 resamples

Note: Estimated effect is significant when CI does not include zero

Note: Significant=* $p < .05$, ** $p < 0.01$

Findings revealed that the CTD significantly predicts CTS ($b=1.313$, $SE=0.151$, $\beta=0.612$, $z=8.68$, $p<0.001$) while CTS significantly predicts GWA ($b=0.009$, $SE=0.003$, $\beta=0.296$, $z=2.87$, $p=0.004$). Analysis also showed partial mediation between CTD and GWA, while accounting for CTS. The indirect effect indicated a small yet significant positive mediation ($b=0.11$, $SE=0.004$, $\beta=0.181$, $z=2.73$, $p=0.006$). These results indicate that when students' dispositions toward critical thinking increase, their CTS also increases, signifying a strong relationship between the variables. Meanwhile, as the CTS (mediator) increases, the academic performance of students is reduced. Since GWA in this sample is reversely scored (i.e. lower GWA means higher performance), the positive increase in CTS results in a lower performance among Social Studies students. The findings are affirmed by the studies of Kuscu & Erdoğan (2024) and Onal (2025), who found a significant relationship between CTD and CTS. Moreover, studies also revealed that CTD and CTS contribute to academic performance (Ali & Awan, 2021; Verawati et al., 2024).

However, in this sample, the mediation of CTS results in lower academic performance,

signifying that students' high dispositions and skills do not translate into improvement in academic achievement. This has implications for the institution's assessment practices, which might not be measuring this cognitive ability. The evaluation tools might be measuring surface-level learning, which could limit the application of the students' CTS. According to Yurt (2023), critical thinking requires effective assessment methods. Open-ended questions that challenge students' mental skills should be used instead of multiple-choice questions that measure rote learning or surface-level learning (Uslu, 2020; Yurt, 2023). When tasks and objectives limit the use of CTS, the CTS application is constrained and is reflected in the academic performance. The objectives and the assessment tasks must be designed to enhance high CTD and CTS levels among learners (Salviejo, 2024). Also, teachers must employ learning methods that engage learners in critical thinking activities (Espiritu & Viado, 2023). They must carefully design their instruction, focusing on learner-centered learning experiences, and offsetting the challenges posed by technology reliance to critical thinking, specifically in

the use of artificial intelligence (Anselmo, et al., 2025).

For the direct effect, the findings revealed that CTD remains a strong negative predictor of GWA even when controlling for CTS. As CTD increases, GWA decreases, indicating an improved academic performance ($b = -0.031$, $SE = 0.006$, $\beta = -0.508$, $z = -4.93$, $p < 0.001$). This means that a strong disposition toward critical thinking not only prompts students to use the CTS but also leverages all other skills, thus resulting in improved academic performance. CTD is significantly related to media literacy skills, entrepreneurship skills, emotional intelligence, innovativeness (Yurt, 2023), inquisitiveness (Kuscu & Erdoğan, 2024), academic self-efficacy, creative thinking (Yurt, 2023; 2025), and learning styles and strategies (Taştı & Yildirim, 2022), enabling students to achieve their academic goals.

Considering the total effect, findings showed that CTD has a strong negative association with GWA ($b = -0.020$, $SE = 0.005$, $\beta = -0.327$, $z = -3.87$, $p < 0.001$). This indicates that as dispositions toward critical thinking increase, students' GWA decreases, which means improved academic performance. Thus, CTD strongly predicts academic performance. The results are similar to existing literature

affirming the contribution of CTD to academic performance (Ali & Awan, 2021; Besoluk & Onder, 2011; Kanwal & Butt, 2021; Kuscu & Erdoğan, 2024; Orhan, 2022; Ozturk, 2022; Salviejo et al., 2024; Verawati et al., 2024). Students with higher CTD have better academic outcomes because they are emotionally resilient and in control of their negative emotions, allowing them to focus on the task (Orhan, 2020) and strategize to achieve better learning outcomes (Verawati et al., 2024).

In contrast, several studies indicated that CTD partially contributes to GPA (Amuda et al., 2022; Bakir, 2015; Karagol & Bekmezi, 2015;) while others concluded that CTD has no relationship with academic performance (Salman & Senel, 2024; Sireerat et al., 2022). These findings revealed contrasting and inconclusive results regarding the contribution of CTD to academic achievement. Thus, conducting further investigation on CTD, especially in social studies, to strengthen the study's findings is necessary.

The summary of the relationships among CTD, CTS, and academic performance along with the standardized path coefficients and effect estimates for the mediation, is visually presented in Figure 4.

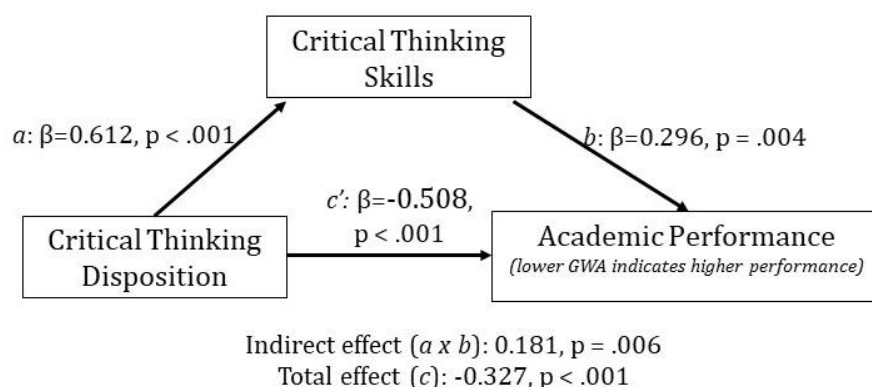


Figure 4. Standardized Mediation Model of CTD, CTS, and Academic Performance

Conclusion

The study described the CTD, CTS, and academic performance of Social Studies students and examined the effect of CTD on academic performance using CTS as the mediating variable. The findings indicated that Social Studies

students have above-average academic performance and possess well-developed CTD and CTS. Critical thinking skills also partially mediate the relationship between CTD and academic performance, resulting in lower academic achievement. The study concluded that CTD

strongly contributes to academic performance, enhances CTS, and leverages other skills and attributes to attain academic success.

Implications of the Study

The study suggests that harnessing students' critical thinking dispositions and skills through carefully designed instruction and activities is imperative in higher education. Teachers should provide ample opportunities for the application of critical thinking in instruction. Furthermore, assessments must measure deep-level learning instead of rote memorization. Using open-ended questions, problem-based learning, case studies, moral dilemma approach, portfolios, and similar tools that allow students to exercise autonomy in thinking, speak their minds, critically analyze situations, evaluate evidence, and make rational choices are necessary to cultivate their critical thinking and develop emotional and mental resilience that they need in this fast-changing world.

Limitation of the Study

Although the study offers contributions, it has limited generalizability because the sample involves junior and senior students, which may not reflect the dispositions, skills, and academic performance of students in lower year levels. Also, the study is conducted at an extension campus that may have institutional contexts and instructional practices that differ from other institutions. Student characteristics may also vary, which could have yielded a different result. Thus, conducting future research that includes students from various institutions and year levels and considers their characteristics and background in the analysis is needed to enhance the generalizability of the results. Qualitative studies may also be conducted to determine how CT is developed and assessed in higher education institutions. Further investigations of CT dimensions and attributes specific to the discipline are also necessary to acquire a comprehensive understanding of how the interaction between dispositions and skills supports academic success in the Social Studies contexts.

Acknowledgement

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The main findings (novelty) and why they are important and useful:

Critical thinking skills partially mediate the relationship between critical thinking disposition and academic performance. However, the mediation results in decreased academic performance of prospective social studies teachers. Meanwhile, considering the total effect of critical thinking disposition on academic performance, it is concluded that critical thinking disposition is a predictor of academic performance. As students' disposition increases, academic performance also increases. The results highlight the importance of carefully designing assessments to measure cognitive abilities of the students. The findings also contribute to the limited body of knowledge on critical thinking disposition, critical thinking skills and academic performance in Social Studies context, especially in the Philippines.

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