

# A Correlational Study between Critical Thinking Skills and Decision Making of the Senior High School Students

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## ABSTRACT

The study focused on critical thinking skills and its influence on the decision-making of senior high school students. The primary goal of the study was to determine the level of critical thinking skills and decision-making in terms of their perspective indicators, the significant relationship between critical thinking skills and decision-making, and what domains of critical thinking skills significantly influenced decision-making. Moreover, this study utilized a quantitative correlational design with 274 respondents among senior high school students in Lorenzo S. Sarmiento Sr. National High School. Average Weighted Mean, Pearson-r, and Multiple Regression Analysis were the statistical tools used in the study. Along with this the results showed a high level of critical thinking skills among students in terms of systematic analysis, thinking within the box, and thinking outside the box. Likewise, the results showed a high level of decision-making in senior high school students in terms of vigilance, buck-passing, hypervigilance, and procrastination. In addition, there was a high correlation and a significant relationship between critical thinking skills and decision-making. Hence, this led to the rejection of the null hypothesis. Also, three domains of critical thinking skills showed moderate ratings as perceived by students. Hence, this led to the rejection of the null hypothesis. Also, all domains of critical thinking skills showed a high rating on decision-making as perceived by senior high school students. Thus, teachers may adopt strategies that enhance students' Critical thinking skills by creating a supportive environment emphasizing systematic analysis, thinking within the box, thinking outside the box.

**Keywords:** GAS, Critical Thinking Skills, Decision Making, Philippines

## INTRODUCTION

A study conducted by Garcia (2020) discovered that students in Singapore struggle with decision making and oftentimes felt overwhelmed by the vast amount of information they need to absorb. In Holland, decision making was a frequent and challenging issue in the field of students' activities, as highlighted by Kulcsár (2020). Similarly, at Toraighyrov University, students faced difficulties in decision making (Azhenov, 2023), influenced by factors like fear of making a bad decision, poor guidance, multiple interests, and worrying about making wrong choices comes from not being sure about what would happen and how it might affect their plans or goals. These challenges highlighted the broader issue of decision-making problems among students in their academic journey (Walker, 2022).

In the Philippines, particularly in Magsaysay, a study conducted by Dela Cruz (2019) exposed that the critical thinking skills played an important role on how students think critically. It would allow them to be

objective, less emotional, as well as more open-minded as they valued their ideas and opinions of others (Bhat et al., 2022). Critical thinking skills were at the forefront of learning, as it aided a student to reflect and understand their points of view, this skill helped a student figure out how to make sense of the world, based on personal observation and understanding (Singh, 2021). Furthermore, critical thinking skills was crucial for effective decision making because it allowed individuals to identify biases and assumptions that could cloud judgment, consider multiple perspective and options and evaluate credibility of information sources (Clauburg, 2023).

On top of that, in Region XI, particularly in Davao City, Logrosa (2021) proclaimed that there was a big problem with students making decision, in situations where making difficult decisions was tough due to not having all the needed information, personal biases, and emotional stress, thus, people often end up making less-than-ideal choices. Based on the study of Merquita (2020), students faced tough challenges, kind of like dealing with a slow-moving problem, as they tried to handle schoolwork, friendships, and their personal goals. Furthermore, in the educational landscape of Mawab, specifically in Lorenzo S. Sarmiento Sr. National High School, it had been observed that some students felt really stressed and found it hard to manage time and decide what is most important. This difficulty led to a pattern of not making the best choices, especially when it came to passing the responsibility to others and delaying tasks, all happening while they were at school.

With this, the researchers were interested to know if critical thinking skills could influence decision making. Consequently, the researchers aimed to investigate the impact of these decisions on the students' educational experiences and outcomes. This research addressed a significant gap in existing studies, as prior research had focused on critical thinking abilities and academic success separately, without examining the complex relationship between critical thinking skills and decision-making in Lorenzo S. Sarmiento Sr. National High School. The study's innovative approach sought to understand how differences in critical thinking skills and abilities influenced students' decision making, providing valuable insights for educators and institutions in creating specialized educational programs. Given the importance of critical thinking for decision making and preparing students for future challenges, this research was seen as an urgent necessity, going beyond simple academic inquiry.

## Research Objectives

This study was conducted to determine the influence of critical thinking skills on the decision making of senior high school students. Specifically, the study sought answers to the following objectives:

1. To assess the level of critical thinking skills among the senior high school students in terms of:
  - 1.1 systematic analysis;
  - 1.2 thinking within the box; and
  - 1.3 thinking outside the box.
2. To find out the level of decision making among the senior high school students in terms of:
  - 2.1 vigilance;
  - 2.2 buck passing;
  - 2.3 hypervigilance, and
  - 2.4 procrastination.
3. To determine the significant relationship between critical thinking skills and decision making of the senior high school students.
4. To determine which of the domains in critical thinking skills significantly influence the decision making of the senior high school students.

## METHODOLOGY

This study used a quantitative, non-experimental research design utilizing a correlational technique. This method was used when the objective described the status of the situation as it existed at the time of the study to explore the causes of a particular phenomenon. In correlational research, it involved collecting data to determine whether the degree of a relationship existed between two or more quantifiable variables (Gay, 2006).

### Population and Sample

Simple random sampling was used in the selection of respondents. The subjects of this study were the 274 Senior High School Students of Lorenzo S. Sarmiento Sr. National High School in the school year 2023-2024. They were ideal respondents for this research as they were entering a phase where they were actively making decisions about their learning and responsibilities.

### Statistical Tool

The following statistical tools were utilized for the data analysis and interpretation.

**Mean.** This statistical tool was used to determine the level of critical thinking skills and decision making of senior high school students in Lorenzo S. Sarmiento National High School.

**Pearson (r).** This statistical tool was used to determine the significance of the relationship between critical thinking skills and decision making of senior high school students in Lorenzo S. Sarmiento Sr. National High School.

**Multiple Regression Analysis.** This statistical tool was used to determine the influence of critical thinking skills on the decision making of senior high school students in Lorenzo S. Sarmiento Sr. National High School.

## RESULTS

### Level of Critical Thinking Skills

Shown in Table 1 are the mean scores for the indicators of Critical Thinking Skills among Senior High School students in Lorenzo S. Sarmiento Sr. National High School with an overall mean of 3.78 and described as 0.61 standard deviation. The high level could be attributed to the high rating given by the respondents in all indicators. This entails that the respondents' responses to the level of Critical Thinking Skills are oftentimes manifested in terms of systematic analysis, thinking within the box, thinking outside the box.

Moreover, the cited overall mean score was the result obtained from the following computed mean scores from highest to lowest: 3.83 or high with a standard deviation of 0.57 for thinking outside the box, 3.80 or high with a standard deviation 0.63 for thinking outside the box, 3.70 or high with a standard deviation 0.62 for systematic analysis.

Table 1. Level of Critical Thinking Skills

Indicator	Mean	SD	Descriptive Level
Systematic analysis	3.70	0.62	High

Thinking within the box	3.83	0.57	High
Thinking outside the box	3.80	0.63	High
Overall	3.78	0.61	High

### Level of Decision Making

Shown in Table 2 are the mean scores for the indicators of decision making among senior high school students in Lorenzo S. Sarmiento Sr. National High School with an overall mean of 3.95 and described as 0.62 standard deviation. The high level could be attributed to the high rating given by the respondents in all indicators. This entails that the respondents' responses to the level of decision making are oftentimes manifested in terms of vigilance, buck passing, hypervigilance and procrastination.

Furthermore, the cited overall mean score was the result obtained from the following computed mean scores from highest to lowest: 4.05 or high for vigilance with standard deviation of 0.63; for buck-passing 4.01 or high with standard deviation of 0.60; 3.90 or high for buck-passing with standard deviation of 0.60; 3.82 or high for procrastination with standard deviation of 0.60.

Table 2. Level of Decision Making

Indicator	Mean	SD	Descriptive Level
Vigilance	4.05	0.63	High
Buck-passing	4.01	0.65	High
Hypervigilance	3.90	0.60	High
Procrastination	3.82	0.60	High
Overall	3.95	0.62	High

### Significance on the Relationship between Critical Thinking Skills and Decision Making

The results revealed that critical thinking skills and decision making have a significant relationship. The result is due to a p-value  $<.001$ , which is less than the 0.05 p-value. Hence, this leads to the decision that the null hypothesis which stated that there is no significant relationship between critical thinking skills and decision making among senior high school students in Lorenzo S. Sarmiento Sr. National High School is rejected. Moreover, Pearson's R value, which is 0.689 further means that there is a moderate correlation between critical thinking skills and decision making.

### Multiple Regression Analysis of The Influence of Critical Thinking Skills on Decision Making

Using the Linear Regression Analysis, the data revealed that the influence of critical thinking skills and decision making has a f-value of 88.006 and corresponding significance p-value of  $<.001$  which was significant.

Consistently, this means that the usage of critical thinking skills influences the decision making of the senior high school students since the probability is less than 0.05. The R squared of 0.494 implies that 49.4% of the decision making of the senior high school students in Lorenzo S. Sarmiento Sr. National High School is influenced by the usage of critical thinking skills, while 50.6% remaining were not covered by the study and is influenced by other factors.

## DISCUSSIONS

### Level of Critical Thinking Skills

The demonstrated level of critical thinking skills among senior high school students at Lorenzo S. Sarmiento Sr. National High School is notably positive, suggesting an active manifestation of these skills in the classroom. This positive correlation underscores the importance of nurturing critical thinking abilities, as students with stronger skills tend to make more informed and effective decisions. This aligns with the proposition of Ramdami (2021) that critical thinking is integral to building learners' knowledge and problem-solving effectiveness, emphasizing its inseparability from educational institutions (Kim & Choi, 2018).

In terms of thinking within the box, the observed high level of critical thinking skills implies a positive inclination toward autonomously acquiring information during interactions or engagements with fellow students. This connection to systematic analysis reflects an aspect of advanced critical thinking skills, in line with the perspective of Fadillah (2023) on critical thinking as a high-level thinking process that should be developed in schools to enhance communication skills (Mendelman, 2018).

### Level of Decision Making

The exhibited level of decision-making among senior high school students at Lorenzo S. Sarmiento Sr. National High School is notably positive, reflecting a proactive engagement in various forms of decision-making. This conforms to the statement of Umass (2018) which stated that this suggests a commitment among students to their academic pursuits over an extended period, resonating with the definition of decision-making as the process of deciding about something important, especially in a group or organization.

Learning decision-making skills is recognized as vital for children's independence, responsibility, and confidence, promoting resilience and encouraging self-exploration (Blackbaud, 2023). Furthermore, this study is corroborated to Williamso (2023), acknowledging that decisions, especially significant ones, have a profound impact on individuals' lives, emphasizes the importance of thoughtful consideration and understanding the ripple effects. This aligns with the definition of Koontz (2018) of decision-making as the selection of a course of action among alternatives, serving as the core of planning. A mindful and informed approach to decision-making ensures students can navigate complexities with resilience and confidence.

### Significance on the Relationship between Critical Thinking Skills and Decision Making

The present study reveals a significant relationship between Critical thinking skills and decision making of the senior high school students in Lorenzo S. Sarmiento Sr. National High School. This implies that critical thinking skills influences Decision making of the senior high school students, which can be seen in the data. This confirms the main anchored theory of this study, the Bounded Rationality Theory of Simon (1950), which claimed that critical thinking skills have positive and significant relationship with decision making. For many individuals, engaging in various activities serves as a way to manage stress, seek challenges, find relaxation, experience enjoyment, connect socially, and mentally detach from reality. Similarly, senior high school students, when facing stress from schoolwork, may turn to activities that offer relief. It is crucial to understand the connection between these coping mechanisms and the development of critical thinking skills and decision-making abilities among students. This recognition highlights the importance of exploring constructive ways for students to handle stress and challenges, ultimately contributing to their cognitive growth and decision-making capabilities.

The relationship between critical thinking skills and decision making is significant among senior high school students at Lorenzo S. Sarmiento Senior National High School. This implies decision making is dependent on critical thinking skills among senior high school students at Lorenzo S. Sarmiento Senior National High School. This finding affirmed the notion of Kahneman (2011) which suggest that critical thinking skills contribute to reflective thinking, ultimately enhancing the quality of decision-making. Despite engaging in various activities, the respondents maintain effective personal interaction.

### **Multiple Regression Analysis of The Influence of Critical Thinking Skills on Decision Making**

Using the Multiple Regression in JASP software, the data revealed that the critical thinking skills and decision making of the senior high school students has a significant influence. The overall results of the critical thinking skills predict decision making of the senior high school students. Therefore, the significance level of hypothesis of critical thinking skills and decision making of the senior high school students is rejected.

Correspondingly, this result corroborates the analysis of Fidan (2019) have pointed out that the critical thinking skills has a significant influence on decision making in many different contexts, also given the significance of decisions in human life, it becomes apparent that enhancing decision-making involves improving thinking skills, making critical thinking abilities. Moreover, this findings support the claim of Yuldiran (2019) that to explore the connection and importance between decision-making and critical thinking examines these concepts iindividual. When critical thinking is applied to decision-making, it entails the assessment of information sources, identification and questioning of biases, and the consideration of options based on evidence and rationality, as emphasized by JD (2023).

### **CONCLUSION**

The findings of the study are used to draw conclusions. The level of critical thinking skills of the senior high school students in Lorenzo S. Sarmiento Sr. National High School is high for systematic analysis, high for thinking within the box, and high for thinking outside the box, thus the overall mean is high for the level of critical thinking skills. The level of critical decision making of the senior high school students in Lorenzo S. Sarmiento Sr. National High School is high for vigilance, high for hypervigilance, high for buck-passing, and high for procrastination, thus the overall mean is high for the level of decision making. Moreover, the findings opposed the theoretical assumption of no significant relationship between critical thinking skills and decision making of the senior high school students in Lorenzo S. Sarmiento Sr. National High School.

Contrary to the assumption, the study concludes that critical thinking skills and decision making were positively correlated. That was, change in the level of critical thinking skills affects the level of decision making. Further, all of the three domains in critical thinking skills significantly influence the decision making of the senior high school students. Given the significance of decisions in human life, it becomes apparent that enhancing decision-making involves improving thinking skills, making critical thinking abilities.

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