ATTITUDES TOWARDS LEARNING AND PERFORMANCE IN MATHEMATICS AMONG GRADE 8 STUDENTS IN CANTILAN NATIONAL HIGH SCHOOL

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ABSTRACT: *The study was conducted to determine if there is a relationship between the attitudes of the student and their performance in Mathematics. The respondents of the study were the Grade 8 students from Cantilan National High School, Magasang, Cantilan, Surigao del Sur. The researchers used a descriptive survey to gain the data needed in the research. The questionnaire material that the researcher used in the study was an adopted questionnaire from the study of Kipronoh [1]. The study revealed that the level of performance of the Grade 8 students in Cantilan National High School is 2.1 and has a verbal description of Very Satisfactory. The level of attitude is 3.57 and has a verbal description of Slightly Positive. The study also revealed that there is a significant relationship between the students' attitude and performance in Mathematics.*

Keywords: Attitudes, Learning, Performance, Relationship

1. INTRODUCTION

Mathematics is one of the important subjects in the secondary school level in the Philippines. Students are required to take Mathematics as one of the major subjects at the secondary level of education. It is very essential for all members of society. Every work has mathematics basic functions, whether in the government or in the private sector employees. When students graduate in the secondary level, they will never be limited in choosing their own careers. This view is held by curriculum developers, educators, parents, and students.

According to Maliki, Ngban, and Ibu [2], Mathematics is described as a subject that affects all aspects of human life at different degrees. And according to The National Mathematics Advisory Panel [3], mathematics is used throughout our daily lives and the importance of mathematics in day-to-day activities is no longer news. However, it was confirmed by Chang and colleagues (2006) as cited by Idowu [4], what remains news is the fact that student's performance in mathematics has not improved significantly in spite of its importance and not even with the introduction and use of technology in mathematics. Mathematics learning and capability to achieve good grades in Mathematics examinations were not only attributed to some unique talents, great effort, or good discipline from an individual, but also to favorable attitudes and interest in Mathematics [5]. Cantilan National High School is very competitive in terms of academic or non- academic performance of the students. In Cantilan institute the capabilities of the students are highly ranked according to their achievements. This may help them to conclude that with their great effort with good discipline, they can increase their interest in Mathematics.

Mathematics performance can be varied based on the attitudes that students will express towards their learning in Mathematics. Students that tend to dislike mathematics at the secondary level are the students who actually experience inappropriate approach when they were at the primary level. Conducting research in determining the attitude towards the learning and performance in Mathematics may help us to create a more positive approach in teaching Mathematics.

Conceptual framework

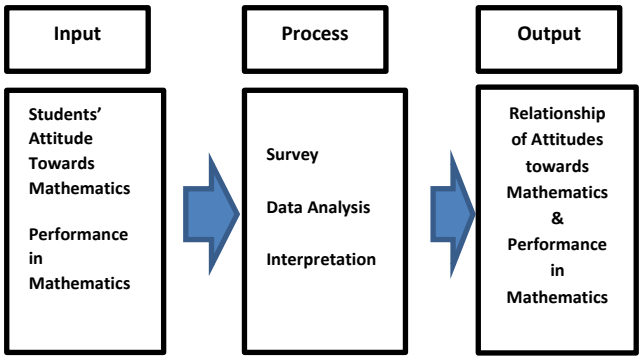

Figure 1. Schematic Diagram of the Study

The first box in Figure 1 shows the variables which are the attitudes and the performance towards Mathematics. The second box shows the process in conducting the study which includes the survey, data analysis, and interpretation. And the third box contains the output which is the relationship of attitudes towards Mathematics and performance in Mathematics.

Statement of the Problem

This study aimed to investigate the attitudes of the students in Cantilan National High School towards learning and their performance in Mathematics and to find out whether such attitudes contributed to the students' performance in Mathematics. Specifically, it sought to answer the following questions:

1. What is the students' level of performance in Mathematics?
2. What is the level of attitude of the respondents towards learning Mathematics?
3. Is there a significant relationship between the students' attitudes and performance in Mathematics?

H_0: There is no significant relationship between the students' attitudes and performance in Mathematics.

2 Materials and Methods

This study used descriptive and inferential research design to determine the level of attitude, level of performance, and investigate the relationship between students' attitudes towards learning and performance in Mathematics. These designs are suited to investigate if the relationship between the variables is strong enough that the researchers can conclude that the independent variable can affect the dependent variables.

Table 1 Number of Respondents

Section	(N) Number of the Students	Sample
Linnaeus	47	26
Kasilag	47	23
Molave	50	24
Apitong	61	26
Acacia	55	25
Narra	52	24
TOTAL	**312**	**148**

Table 1 shows the number of samples per section. Out of 312 students of Grade 8, 148 students were taken as samples.

In determining the respondents' level of performance in Mathematics, the following scaling was used.

Table 2 Level of Performance

Mathematical Abilities	(GPA) Grade Percent Average
Outstanding	90%-100%
Very Satisfactory	85%-89%
Satisfactory	80%-84%
Fairly Satisfactory	75%-79%
Did Not Meet Expectation	Below 75%

Instrument

This study used an adapted questionnaire from the study of Kipronoh [1] (2007) to gather information. The research questionnaire was used to obtain data from the students of Grade 8 secondary school in Cantilan National High School. A 5-point Likert-scale ranging from strongly agree to strongly disagree was used to determine the students' responses in terms of their attitudes toward mathematics.

The level of students' attitude was measured as shown below:

Table 3 Students' Level of Attitude

SA (Strongly Agree)	1	4.2 – 5.0	HP (Highly Positive)
A (Agree)	2	3.35 – 4.19	SP (Slightly Positive)
U (Unsure)	3	2.6 – 3.34	N (Neutral)
D (Disagree)	4	1.8 – 2.59	SN (Slightly Negative)
SD (Strongly Disagree)	5	1 – 1.79	HN (Highly Negative)

3 RESULTS AND DISCUSSION

Table 4 Means of Students' Attitudes & Performance in Mathematics

Section	Performance	Verbal Description	Attitude	Verbal Description
Linnaeus	1.65	Outstanding	3.67	Slightly Positive
Apitong	2.21	Very Satisfactory	3.56	Slightly Positive
Kasilag	2.03	Very Satisfactory	3.88	Slightly Positive
Molave	2.23	Very Satisfactory	3.33	Neutral
Acacia	2.28	Very Satisfactory	3.30	Neutral
Narra	2.18	Very Satisfactory	3.73	Slightly Positive
Overall Mean	2.1	Very Satisfactory	3.57	Slightly Positive

Each of the respondents' strata represents a unique data as follows: the Linnaeus respondents show an outstanding performance level of 1.65 mean and Slightly Positive level of attitude with the mean of 3.6. Other sections like Apitong, Kasilag, and Narra obtained a Very Satisfactory performance level with means of 3.56, 3.88, and 3.73 respectively and their attitude level has a verbal description of Slightly Positive with means of 2.21, 2.03, and 2.18 respectively. Lastly, although the Molave and Acacia have a Neutral level in terms of their attitude with means of 3.33 and 3.30, their performance level is Very Satisfactory with means of 2.23 and 2.28.

The overall mean performance level of Grade 8 is Very Satisfactory with 2.1 mean and their attitude level is Slightly Positive with the mean of 3.57.

Table 5 Relationship between the Students' Attitude and Performance in Mathematics

		Attitude	Performance
Attitude and Performance	Pearson Correlation	1	.578**
	Sig. (2-tailed)		.001
	N	148	148

The computed r-value is 0.578 and the p-value is 0.001 which is less than 0.05. Therefore, the null hypothesis is rejected. Thus, there is a significant relationship between the students' attitude towards Mathematics and their level of performance. This implies that attitude in Mathematics can affect students' performance in his/her Mathematics subject. This further implies that students' positive attitude in Mathematics can greatly improve his/her performance in Mathematics. The result conforms to the result of the study conducted by M. Nicolaidou and G. Philippou [6] which revealed significant correlations between attitudes and performance in Mathematics.

4 CONCLUSIONS AND RECOMMENDATIONS

Based on the findings, it can be asserted that the Grade 8 students of Cantilan National High School have a Very Satisfactory performance in their Mathematics subject. They also have a slightly positive attitude towards their Mathematics subject. And, students' attitude towards mathematics can significantly affect their performance in Mathematics.

In view of the conclusions, it is recommended that students should be encouraged to develop positive attitudes towards Mathematics to help improve their performance in Mathematics. Teachers also should create a learning environment that could help develop students' positive attitudes towards Mathematics. Moreover, it is recommended that parents should find ways and means to help their children develop positive attitudes towards Mathematics. And lastly, future researchers are encouraged to conduct researches related to this study.

5 REFERENCES

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