

Attitude and Performance in Mathematics of the Grade Six Pupils

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Abstract—The study aimed to determine the relationship between the attitude and performance in Mathematics of the Grade six pupils. Utilizing the descriptive-correlational research design for an in-depth analysis of the study, the researcher used the survey instruments on Attitude in Mathematics Questionnaire adapted by Aiken Dredger's Questionnaire on Attitudes and Interest in Mathematics. Simple Percentage, Weighted Mean and linear regression were the statistical tools used. The researcher found out that the Grade Six pupils has moderately positive attitude towards Mathematics while their performance is low. Moreover, this study revealed a significant relationship between the attitude and performance in Mathematics of the Grade Six pupils. Thus, attitudes of the pupils towards the subject influenced their performance. It is recommended to utilize the proposed intervention plan.

Keywords — *Attitude, Performance, Grade Six pupils, Mathematics*

I. Introduction

Attitude towards mathematics plays a crucial role in the teaching and learning processes of mathematics. It effects students' achievement in mathematics. The teaching method, the support of the structure of the school, the family and students' attitude towards school affect the attitudes towards mathematics. Usually, the way that mathematics is represented in the classroom and perceived by students, even when teachers believe they are presenting it in authentic and context dependent way stands to alienate many students from mathematics (Barton, 2000; Furinghetti and Pekhonen, 2002). Researchers concluded that positive attitude towards mathematics leads students towards success in the subject.

Mathematics is one of the subject areas in the curriculum offered in all elementary schools. This provides the students' opportunities to learn number concepts, computational skills, and problem-solving skills. The knowledge of mathematics is one of the measures of intellectual life.

Mathematics has a preparatory value. It prepares the pupil for the more sophisticated and complex mathematics at the college level. Since the subject is highly sequential that concepts are

developed in simpler mathematics are needed in the more advanced courses. The importance of secondary school mathematics is undeniable. Even if the student fails to go to college he will still need mathematics in his daily life, in the performance of his duties as a citizen, in a useful vocation, and in dealing with his physical and social environment.

The major function of mathematics is to develop the minds of the learners to think and use techniques in solving mathematical problems. It then behooves the high school teachers to encourage the students to love and study mathematics (DepEd Primer, 2002).

Norton (2010) teaching mathematics is not merely teaching the students to add, subtract, multiply and divide. It should provide experiences in which the students are led to discover, to create, to figure out things largely by their own efforts, in any idea, principle, or relationship rather than to be told about them.

Smith (2004) said, there are three distinct, common reputable types of teaching mathematics. They are briefly described as teaching the rule; telling the students everything that is explaining every step for them to understand, to remember, and to follow; and the so-called discovery method. In solving mathematics the problem, the students go through the given facts step by step. Then they finally come to the solution and get an insight of the mathematical concepts involved and have it stated in their own words according to their understanding of the process they have performed in the solution of the problem. In other words, they gained an insight of some kind. The insight is considered the product of teaching.

Nevertheless, mathematics, according to most pupils is a difficult subject. It has been observed that student's performance in mathematics remained to be poor and many students have developed a negative attitude towards this subject. Because of this, the school should provide opportunities for the students to learn to compute for mastery in mathematical skills that are more accurate, balanced and comprehensive. It should be the goal of the school that the students should acquire the different mathematical skills and to apply numbers to the situations in their daily life. One important thing a mathematics teacher must consider in teaching the subject is the development of the pupil's appreciation of mathematics. Appreciation in mathematics is a favorable outcome in the affective aspect of mathematics learning. It has something to do with the acquisition of attitudes, values, and appreciation. In order that the student would be interested in mathematics, the school must provide a sound mathematics program (Briones, 2013). Thus, this study is formulated to determine the relationship between attitude and performance in Mathematics of the Grade Six pupils. A proposed intervention plan will be formulated based on the findings of the study.

It is in the rationale that the researcher who is currently teaching in the above mentioned local, would like to delve worthy research undertaking that will benefit the school she is currently teaching and that of her Graduate Program.

This study determines the relationship between attitude and performance in Mathematics of the Grade Six pupils in Cabaliwan Elementary School of Merida District, Leyte Division. A proposed intervention plan will be formulated based on the findings of the study.

Specifically, this study sought to answer the following questions:

1. What is the attitude of the Grade Six pupils in Mathematics?
2. What is the performance of the Grade Six pupils in Mathematics?
3. Is there a significant relationship between the attitude and performance in Mathematics of the Grade Six pupils?
4. What intervention plan can be proposed based on the findings of this study?

II. Methodology

Design. This study employed the descriptive-correlational research design to determine the relationship between attitude and performance in Mathematics of the Grade Six pupils. Cabaliwan Elementary School, Merida District, Leyte Division is the main locale of the study. The 20 Grade Six pupils enrolled in the said locale for School Year 2019-2020 are the main respondents of the study and Survey on Attitude in Mathematics and grades in Mathematics for the 2nd quarter were used. This research focused on determining the attitude and performance in Mathematics of the Grade Six pupils and its relationship. A Proposed Intervention Plan based on the findings of the study is the output.

Sampling. There are 20 Grade Six pupils involved in this study. The research instruments were distributed personally with consent from the parents.

Research Procedure. The researcher prepared the research design and tools to be utilized in the study. Approval and recommendation from the Panel of Examiner of the Graduate Studies was sought. A letter request to conduct this study was forwarded to the Office of the Schools Division Superintendent. Upon approval, permission from the District Supervisor and School Head was secured before the actual gathering of data. Validation of the instruments through the School Head, District Supervisor and District Mathematics Coordinator was sought. Orientation of the participants was done in the classroom during their Math time. Permission from the parents was secured. Administering of the survey followed. After accomplishing the survey data were tallied and submitted for statistical treatment. Analysis and Interpretation of Data. Making of Proposed Intervention Plan followed.

Ethical Issues. The right to conduct the study was strictly adhered through the approval of the Schools Division Superintendent of the Division, District Supervisor of the District, and school principal. Orientation of the respondents was done using face to face modality. In the orientation, issues and concerns were addressed and consent to be included in the study were signed.

Treatment of Data. The Simple Percentage and Weighted Mean were employed to determine the attitude and performance in Mathematics of the Grade Six pupils. Pearson r was used to determine the significant relationship between the attitude and performance in Mathematics of Grade Six pupils.

III. Results and Discussion

Table 1
Attitude in Mathematics of the Grade Six Pupils (N=20)

ATTITUDE SCALE	FREQUENCY	PERCENT	INTERPRETATION
4.21 – 5.00	1	5.00	Very Positive
3.41 – 4.20	9	45.00	Positive
2.61 – 3.40	4	20.00	Moderate Positive
1.81 – 2.60	6	30.00	Fairly Positive
1.00 – 1.80	0	0.00	Negative
TOTAL	20	100.00	
Mean 3.19 Standard Deviation = 0.65		MODERATE POSITIVE	

Table 1 presents the attitude in Mathematics of the Grade Six pupils. It was revealed on the table that among the 20 Grade Six pupils 1 or 5% rated very positive, 9 or 45% has positive attitude while 4 or 20% moderately positive and 6 or 30% has fairly positive attitude in Mathematics. Moreover, the data has a mean of 3.19 with standard deviation of 0.65 which is interpreted as moderately positive. This means that the Grade Six pupils has moderately positive attitude in Mathematics. This implies that the attitudes of pupils towards the subject can be raised to higher level if they are properly motivated and guided to like and love the subject by giving them challenging activities and do the task with ease and fun while accomplishing the mathematical tasks from which they feel with enjoyment.

Table 2
Performance in Mathematics of the Grade Six Pupils (N=20)

GRADES IN MATHEMATICS	FREQUENCY	PERCENT	INTERPRETATION
95 – 99	0	0.00	
90 – 94	3	15.00	High
85 – 89	5	25.00	Average
80 – 84	5	25.00	Low
75 – 79	7	35.00	Very Low
TOTAL	20	100.00	
Mean = 82.65			
Standard Deviation = 5.79		LOW	

Table 2 presents performance in Mathematics of the Grade Six pupils. It was revealed on the table that among the 20 pupils, 3 or 15% got a grade between 90-94 which is high, 5 or 25% got the grade between 85-89 which is average while 5 or 25% got a grade between 80-84 which is low and 7 or 35% got a grade between 75-79 which is very low. Moreover, the table revealed that the mean performance in Mathematics of the Grade Six pupils is 82.65 with standard deviation of 5.79 which is interpreted as low. This means that all pupils passed the subject for the grading period but with low performance. This implies that teachers need to plan for the teaching learning process to employ innovations in her strategies, approaches and techniques to improve the learning outcome to become impressive in the phase of evaluation of performance.

Table 3
Test of Relationship

Computed value or t	Critical t	Decision	Interpretation
0.7568	0.399	Reject H _o	Significant

Table 3 disclosed that the computed value or t using the Linear Regression analysis was 0.7568 which is higher than the table value of .399, so null hypothesis is rejected. This means that there is a significant relationship between moderate positive attitudes of the grade six pupils toward mathematics and their low performance in the subject. This implies that the attitude of the pupils towards the subject may affect their performance. Moderately positive attitude results to a low performance in Mathematics. In the teaching-learning process, there is always evaluation for it is an integral part of teaching. It is not merely a test at the end of mathematics lessons, instead, evaluation goes on constantly during lessons and units and it is clearly related to the teacher's goal and point of view on mathematics teaching. Besides, being a continuous experience, evaluation is

cumulative. A cumulative record should keep for all children. If such a record is available then his mathematics exposure can be quickly and easily seen.

IV. Conclusion

The data revealed a significant relationship between the attitude and performance in Mathematics of the Grade Six pupils. This means that the attitude of the pupils influenced their performance towards Mathematics. Thus, carefully planning learning activities and evaluative measures are needed to enhance pupil's attitude so as to improve their performance in the subject.

V. Recommendations

1. The Proposed Intervention Plan formulated should be utilized;
2. In the teaching problem solving, the teacher should select problems that are of practical value to the students. The problem exercises found in the text served as guide. However, there must be practical applications of the problem that are related to real-life situations in the community.
3. Teachers should unlock the difficult words used in teaching Mathematics to help the pupils in understanding the concept.
4. Teachers should provide an interactive motivation to arouse the interest of the pupils to learn the lessons in Math.
5. Teachers should provide interactive and hands-on activities for the pupils during teaching-learning process.
6. School principal should see to it that each teacher and pupil enjoy teaching and learning;
7. School principal should allocate funds for the construction of instructional materials;
8. School Heads should develop among pupils and teachers the love for Math; and
9. Future researchers should replicate this study to include different locale, and include different variables aside from the mentioned in this study.

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The author was born on November 12, 1982 at Brgy. Cabaliwan, Merida, Leyte, Philippines. She is presently residing at Bangkuan Street, Sitio Baugo, Brgy. Curva, Ormoc City, Leyte. She finished her Elementary Education at Cabaliwan Elementary School, Cabaliwan, Merida, Leyte and graduated as Salutatorian in the year 1996. She earned her secondary education in Merida Vocational School Puerto Bello Annex bearing the same Honors in the year 2000. She graduated with the degree in Bachelor in Elementary Education specialized in Mathematics at Western Leyte College of Ormoc, Ormoc City, Leyte, Philippines in the year 2004. She completed her Academic Requirements for her Masteral Degree major in Education Administration and Supervision and is currently working on her thesis at Western Leyte College of Ormoc, Ormoc City, Philippines.

She is currently a Teacher – III in Cabaliwan Elementary School, Merida District handling Grade Five learners. She is also entrusted with the following ancillary works in school such as being the Disbursing Officer, Math, GSP, EPP and MAPEH coordinator.

She received several awards in the District and Division Level as coach in various Mathematics and Araling Panlipunan events and contests.