CORRELATES OF MATHEMATICS PERFORMANCE OF SOPHOMORE STUDENTS OF INTEGRATED PUBLIC SCHOOLS IN THE DIVISION SAMAR: BASIS FOR INSTRUCTIONAL REDIRECTIONS

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APPROVAL SHEET

This thesis entitled **"CORRELATES OF MATHEMATICS PERFORMANCE OF SOPHOMORE STUDENTS OF INTEGRATED PUBLIC SCHOOLS IN THE DIVISION SAMAR: BASIS FOR INSTRUCTIONAL REDIRECTIONS"** has been prepared and submitted by **JOEL R. SINTOS**, who having passed the comprehensive examination, is hereby recommended for oral examination.

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DEDICATION

To my ever dearest wife . . . . .

LYN

And to my daughter

LEANN

for their Love and Understanding, I dedicate this humble work.

Joel

ABSTRACT

The study aimed at determining relationships between certain teachers, students, and home related factors and mathematics performance of sophomore high school students of integrated schools in the Division of Samar for the school year 2008-2009. This study used the descriptive correlational design. The descriptive method was used to describe and explain the level of mathematics performance of second year high school students of integrated schools in the Division of Samar, and the correlates or factors, namely: students-related factors, teachers-related factors and home-related factors. The relationship between level of Mathematics performance of the student-respondents and attitude of parents towards mathematics performance of the student-respondents and attitude of parents towards mathematics obtained an r-value of 0.08. the computed t0value is 1.31, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df=279. The hypothesis, "There is no significant relationship between attitude of the parents towards Mathematics and level of performance in Mathematics of the student-respondents" is accepted. The teacher-related factors which are significantly related to the level off Mathematics performance of the student-respondents are sex, and highest educational attainment. The home-related factors which are significantly related to the level of Mathematics performance and average monthly family income. For the recommendation, the teachers should diagnose the students for pre-requisite skills in Mathematics by giving them a diagnostic test which will cover content or the

minimum learning competency of every year level since higher level skills is build up from lower level skills.

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Chapter 1

THE PROBLEM AND ITS SETTING

Introduction

The decreasing quality of education in the Philippines especially in the lower levels of education need concerted effort and should be address as soon as possible if the Philippines is to compete with its neighbors in Asia.

Article XIV, Section 1 of the 1987 Philippines Constitution provides that "The State shall protect and promote the right of all citizens to quality education at all levels and shall take appropriate steps to make such education accessible to all" (Cruz, 1996: 12). From this, it is safe to assume that education is seen to be the means by which the Philippines will have competitive advantage over its Asian counterparts and will be able to recover from economic depression.

Thus, every educational institution should provide excellent education for Filipinos for possible employment in the future. It reminds institutions to focus on its responsibility of giving progressive mode of curricular program to equip the graduates with appropriate skills and work values. Thus, there must be a strong support in the education sector's attempt to improve the quality of education, especially in mathematics education from all sectors of society.

Mathematics is a study of relationship among quantities, magnitudes, and properties and of logical operation by which unknown quantities, magnitudes, and properties may be deduced (Microsoft Encarta, 2003). It is acknowledge that

it is an important driving force that would speed up the development of the country by creating mathematically gifted graduates competent in business, banking, commerce and other related fields. In spite of the intrinsic value of mathematics, almost all students in learning institutions regard mathematics as a difficult subject thereby causing deficiencies in performance in the said subject (Strauss, 2003: 8). Result of the assessment made by the "Third International Mathematics and Science Study (TMISS) in 1999 and 2003 showed that the Philippines fall below the international average of 36 countries in mathematics. In fact the Philippines placed fourth to the last. This fact was obtained after giving achievement test constructed according to the principles of modern test construction, supplemented with student questionnaires on demographic background variables, motivation and students' perceptions of the classroom environments.

Integrated schools grow out of the demand of some barangays for high schools. This was provided under Republic Act 9155 (The Governance of Basic Education Act of 2001), the objective of this act is to establish school and learning centers as facilities where school children are able to learn. An establishment of integrated schools from existing public elementary and public high schools shall be encouraged. Thus, in one campus there is a complete elementary and high school with one principal serving as the administrator. It would be an understatement if performance of students in such type of schools is at par with schools which operate as sole high schools. Resources such as school building

and other school facilities in this type of schools are limited and scarce and teachers have to adopt and use the "make dos".

The available data on National Achievements Test result in Mathematics of students in integrated schools in the Division of Samar for SY 2007-2008 and 2008-2009 showed the following: a) for Guinsorongan Integrated School (GIS), the mean score for Mathematics in the NAT was 78.80 in SY 2007-2008 while for SY 2008-2009 the mean score for Mathematics in the NAT was 79.63; b) for Zumarraga Integrated School (ZIS), the mean score for Mathematics in the NAT was 78.91 in SY 2007-2008 while for SY 2008-2009 the mean score for Mathematics in the NAT was 42.16; c) for Mualbual Integrated School (MIS), the mean score for Mathematics in the NAT was 82.31 in SY 2007-2008 while for SY 2008-2009 the mean score for Mathematics in the NAT was 73.80; d) for Burgos Integrated School the mean score for Mathematics in the NAT was 63.80 in SY 2007-2008 while for SY 2008-2009 the mean score for Mathematics in the NAT was 70.46; e) for Cabungaan Integrated School the mean score for Mathematics in the NAT was 82.22 in SY 2007-2008 while for SY 2008-2009 the mean score for Mathematics in the NAT was 59.05; f) for Tominamos Integrated School the mean score for Mathematics in the NAT was 84.87 in SY 2007-2008 while for SY 2008-2009 the mean score for Mathematics in the NAT was 73.16, and g) for Tenani Integrated School the mean score for Mathematics in the NAT was 77.63 in SY 2007-2008 while for SY 2008-2009 the mean score for Mathematics in the NAT was 61.10. Based from the 2007-2009 DepEd NAT result, the Integrated

Schools of Samar Division was in a higher in rank in NAT compared to the none Integrated School, maybe because the number of enrollees of every school. Based from the study, the Integrated Schools has only few number of second year enrollees compared to the none Integrated School in which all the students in Integrated school are accommodated by the Teacher. So, the more students belong in a small class performed better than students belong in a big class.

It is a depressing situation considering that at its greatest height mathematics may become an effective way of developing a strong manpower that will bridge the gap between industry and education by facing the challenge of "adaptive change" (Santos, 2000: 2) however, this sad fact may also be a challenge for teachers in Mathematics to investigate on some factors that may have influence on the students' achievements in the said subject.

Understanding why some students achieve better performance in Mathematics than other students involves knowing some factors that may have influence on the students' Mathematics achievements. These factors may be inherent in the students, in the teachers and in their homes. The home, especially the parents, plays a vital part in calculating in their mind the value of education as early as when they are small children as it is at home that the children learn about the basic of reading, writing and arithmetic (Panopio, et al., 1994: 4). Among those that children may pattern after their parents are their educational attainment and their relationship with their own children.

Besides their parents, students' achievements may also be influenced by factors that are inherent in themselves such as their study habits and their attitudes towards the subject. However, the greatest task of enhancing the learning of the students rest upon their teacher. Aquino (1988: 515) stressed that since teachers have the responsibility of instilling upon the children the love for their education they are to pursue excellence and competence such as in their knowledge of content and ability to use suitable learning environment for the needs of the students.

With the importance of knowing some factors that influence achievements in mathematics of students, the researcher, being a mathematics teacher of Guinsorongan Integrated School (GIS), has thought of this research geared towards determining the correlates of mathematics achievements of second year high school students of integrated school in the Division of Samar. Hence, this research was conducted for the purpose of knowing what student-related, teacher-related and home variates may have influenced on the achievements in Mathematics of second year high school students of integrated school in the Division of Samar.

Statement of the Problem

The study aimed at determining relationships between certain teachers, students, and home related factors and mathematics performance of sophomore

high school students of integrated schools in the Division of Samar for the school year 2008-2009.

Specifically, the study sought answers to the following questions:

1. What is the profile of the second year high school students of integrated schools in the Division of Samar in terms of:

   1.1 age;

   1.2 sex;

   1.3 grades in elementary mathematics;

   1.4 grades in first year mathematics;

   1.5 grades in first year English;

   1.6 general weighted average (GWA) in their first year;

   1.7 study habits, and

   1.8 attitude towards mathematics?

2. What is the profile of the second year high school Mathematics teachers of integrated schools in the Division of Samar with respect to the following variates:

   2.1 age;

   2.2 sex;

   2.3 average family income per month;

   2.4 educational background;

   2.5 teaching experience;

   2.6 teaching load;

2.7 relevant trainings and seminars attended; and

2.8 attitude towards Mathematics?

3. What is the home profile of the student –respondents with respect to the following?

3.1 parents' age;

3.2 parents' educational attainment;

3.3 parents' religions;

3.4 average family monthly income;

3.5 household sizes;

3.6 parents' extent of supervision provided to their children's studies, and

3.7 parents' attitude towards Mathematics?

4. What is the level of Mathematics performance of the student-respondents based on the Mathematics Achievement Test prepared by the researcher?

5. Is there a significant relationship between the students-respondents' level of Mathematics performance and the following:

5.1 teacher-related factors;

5.2 students-related factors; and

5.3 home-related variables?

6. What implications for instructional redirections may be derived from the findings of the study?

Hypothesis

To shed light to the problems raised in this study, the following hypothesis was tested:

1. There is no significant relationship between the student-respondents' level of Mathematics performance and the following:

   1.1 teacher- related factors;

   1.2 student-related factors, and

   1.3 home related variables.

Theoretical Framework

This study is based primarily on the nature and nurture theory espouse by psychologists, namely: Jean Piaget and B.F. Skinner. The said theory maintains that an individual is a unique creature that is the result of the interaction between heredity, the genetic predispositions transmitted by their parents, and environment, the condition outside the organism that influence behavior, development and life processes, except genes (Sevilla, et al., 1988: 63). For this reason, Hildreth, cited by Sevilla, et al., (1988: 63), stressed that people are not equal in development, because they are biologically unequal to begin with, and the resulting interplay with the environmental forces makes for still greater differentiation.

Based on this theory, it is safe to say that mathematics performance is influenced by factors that are either from the genetic predisposition of the

learners and from those conditions that are present in their environment. According to Dixon (2002: 1), a professor at the University of Hawaii, during his inaugural address at the International Union of Anthropological and Ethological Science in Tokyo, the neurophysiologic basis of number sense is found in the angular gyros. This finding implies that mathematics performance has something to do with physiology that, in turn, may be dictated upon by genetic forces Dixon (2002: 1). As such, mathematics can be instilled into the child's mind during the early years of his development. However, the rest of his mathematics learning comes from the environment such as the school, which gave some form of cultural enrichment. This shows the interplay of nature and nurture in the mathematics performance of students.

Likewise, this study finds its basis on Piaget's theory of cognitive development. Piaget (1972: 56) espoused that an individual's behavior is controlled through mental organizations called schemes that he uses to represent the world and designate action. This adaptation is driven by a biological drive to obtained balance between schemes and the environment. In explaining how an individual attempts to adapt, Piaget described two processes, namely: a) assimilation, and b) accommodation. He averred that both of these processes are used throughout the person's life as the person increasingly adapts to the environment in a more complex manner (Piaget, 1972: 59).

Moreover, he proposed that cognitive growth takes place in developmental stages which means that the nature and make –up of intelligence

change significantly over time. The stage of cognitive growth broadly represents major transformation of mental organizations, which proceeds from assimilation to accommodation. The activity of assimilation allows individuals to assimilate certain experience from the environment that force the child to accommodate or internalize those experiences. These processes then result to adoption that is a kind of learning attainment.

The above-mentioned theory implies that the learner goes into several stage of cognitive development that the school, the teacher and the parents have to take into account. The school, through its curriculum should provide specific educational experience, based on the children's development level, to foster intellectual growth, especially in the fields of mathematics. The teacher should provide meaningful experience to the learners for the latter to be able to assimilate and accommodate concepts and principles in mathematics. Besides them, the parents are also responsible for guiding their children as they progress through the different stage of cognitive growth.

The theories cited here clearly explains that mathematics performance is highly an individual experience that progress through several stages and that is influenced by some factors that come either from nature or from nurture, from the teachers, from the schools or from the students themselves.

Conceptual Framework

The schema in the next page showed the conceptual framework of the study.

At the base frame of the schema are the Mathematics II teachers, sophomore students and their parents of the public integrated schools in the Division of Samar, the respondents and research environment, respectively. This was conducted during the school year 2008-2009, the time frame of the study.

The base frame is connected by a single-edged, unidirectional arrow to the bigger frame which contains the research process. The study was a descriptive-correlational one which aimed at determining the relationship, as shown by the double-edged arrow, between certain teacher, student and parents-related factors and the mathematics performance of the students-respondents, represented by the result of the Achievement Test in Mathematics prepared by the researcher.

Among the teacher-related factors studied here were as follows: a) age; b) sex; c) average family income per month; d) educational background; e) teaching experience; f) teaching load; g) number of relevant trainings/seminars attended, and h) attitude towards Mathematics. On the other hand, the students-related factors determined here were the following: a) age; b) sex; c) grade in elementary mathematics; d) grade in first year mathematics; e) grade in first year English; f) general weighted average grade (GWA) in first year; g) study habits in

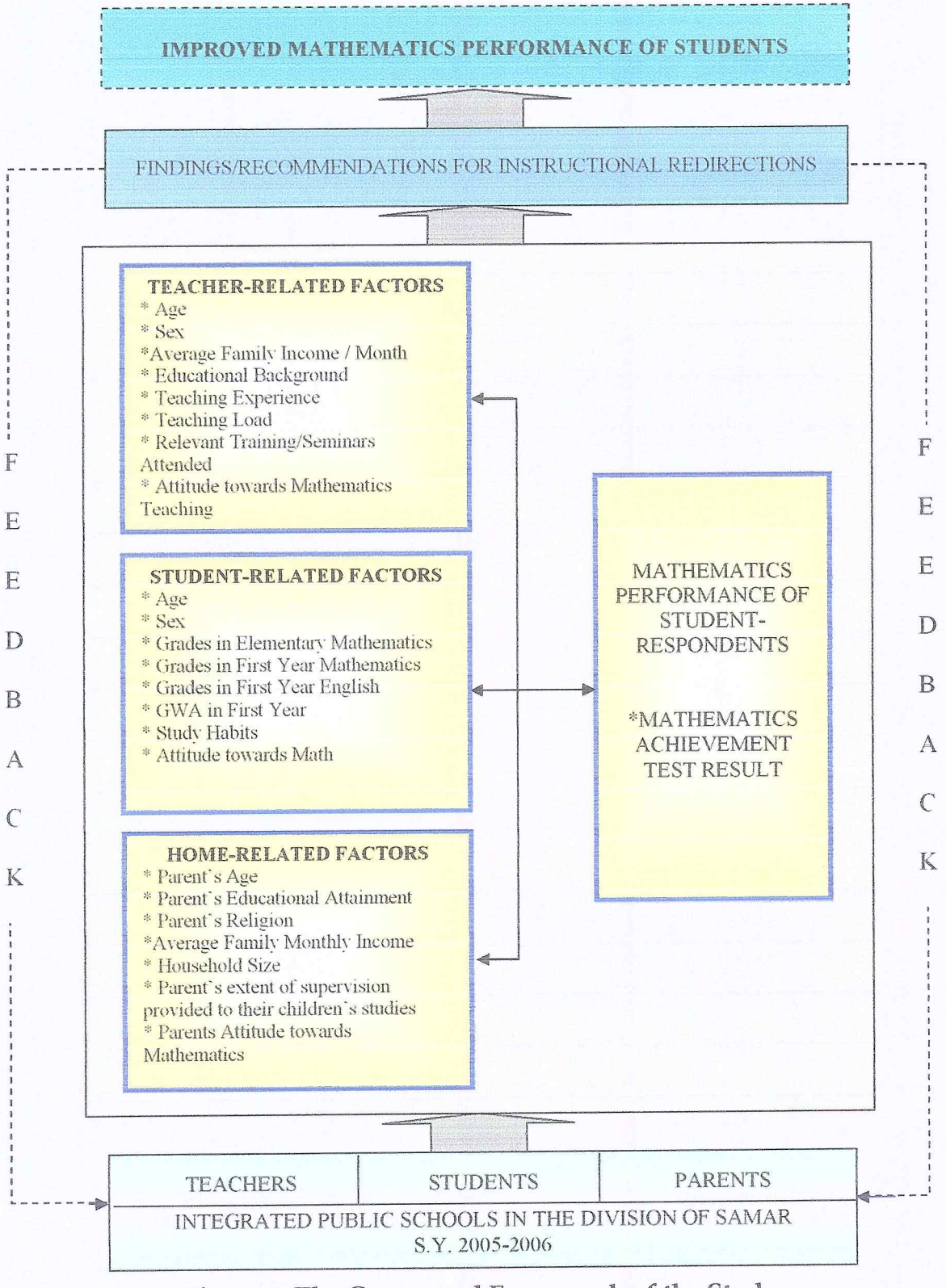

Figure 1. The Conceptual Framework of the Study

Mathematics, and h) attitude towards Mathematics. The home-related factors were: a) parents' age; b) parents' educational attainment; c) parents' religion; d) average family monthly income; e) household size; f) parents' extent of supervision provided to their children's studies, and g) parents' attitude towards Mathematics.

After collecting the needed data, they were analyze and interpreted to arrive at major findings of the study. The recommendations based on findings of the study would serve as instructional redirection, shown by the third box. The study aimed ultimately at improving mathematics performance of the student.

Significance of the Study

The findings of this study would provide valuable insights and practical suggestions to the following people involved in teaching Mathematics in integrated public schools in the Division of Samar.

To the students of integrated public schools. The result of this research would equip them with the necessary skills in Mathematics needed in pursuing higher education after graduation from high school. This would also provide them with baseline information about factors which strongly influence their performance in Mathematics.

To the mathematics teachers of integrated public schools. The study would involve the relationship of certain variates with Mathematics performance of students. As such, this research would prove to be of primary importance

because this will served as guide in utilizing appropriate teaching techniques that will develop every students in integrated public schools to be mathematically proficient.

To the parents. The present study would help them understand their roles in the school performance of their children. The parents in turn will be able to develop ways to encourage their children to study more, specifically in Mathematics.

To the school administrators of integrated schools. The present investigation would serve as baseline information for the school administrators to create measures that will increase the attainment of the goals of integrated public schools, that is, the production of the quality graduates that are mathematically competent.

To policy makers. This study would enable policy makers, that is, those who are connected with the Department of Education (DepEd), to gain insights into the establishment of programs that aimed to enhance the effectiveness of the Mathematics curriculum.

To the future researchers. The study would provide insights to future researchers to conduct a study that specifically deals with each of the variates. This would also serve as bases for future researchers to conduct assessment studies on secondary Math curriculum given the factors that are studied here.

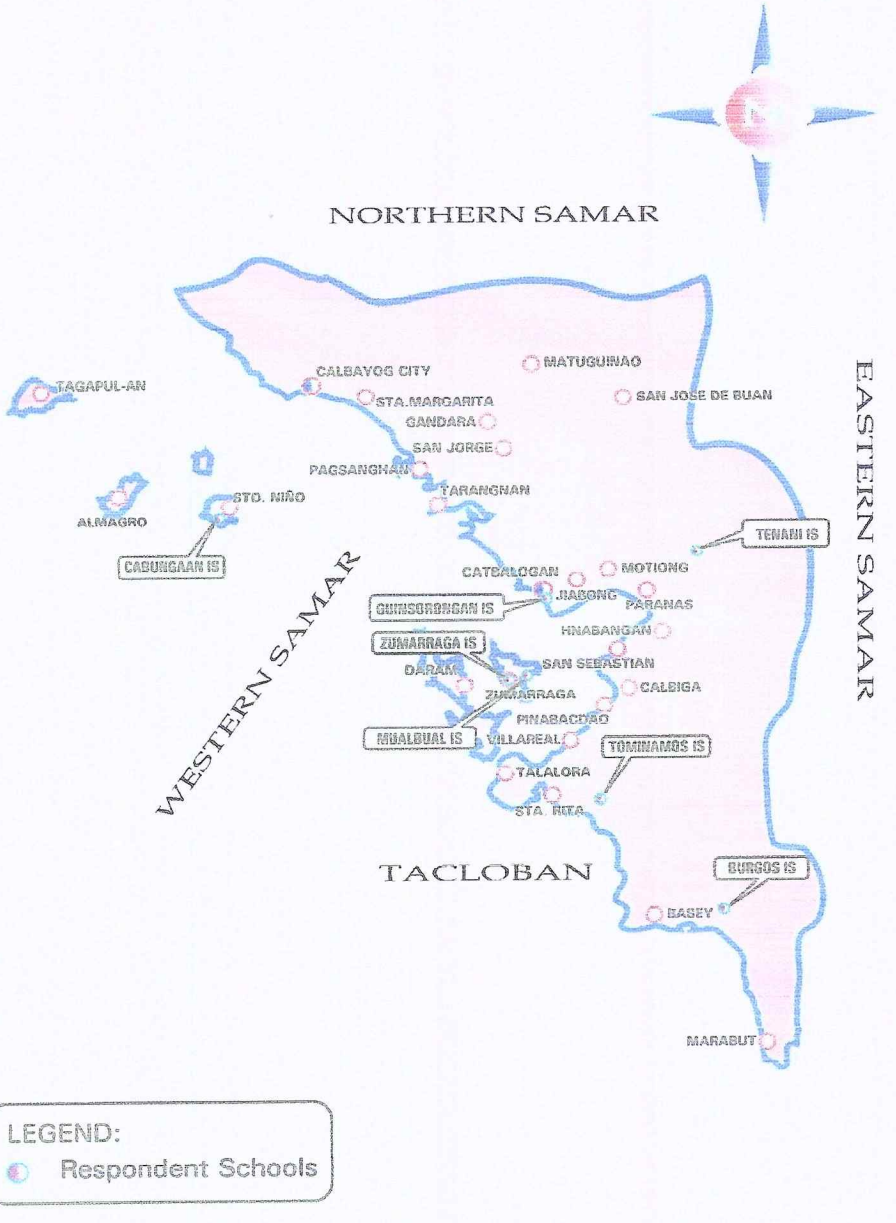

Figure 2. Map of Samar showing the Locations of Integrated Public Schools in the Division of Samar

Using an "Achievement Test in Mathematics" developed by the researcher and "Questionnaire" for the three groups of respondents, the researcher gathered the needed data. The study period covered the school year 2008-2009.

Definition of Term

To be able to facilitate the readers' comprehension of this study, the following terms, as used in the study, will intend to mean as follows:

Age. It refers to the length of time for which a being or thing has lived or existed (Essential English Dictionary, 2004: 11). In this study, it refers to the chronological age of the respondents ranging from 13 to 25 years old.

Attitudes. This term refers to certain emotionalized responses that determine the nature of conduct in a variety of situations, and cause it to conform to certain general requirement (Kishor; 2000: 21).

Attitudes towards Mathematics. This refers to a personal view of mathematics, either favorable or unfavorable, an option or general feeling about mathematics, its concepts, symbols and principles (Microsoft Encarta Dictionary, 2003). In this study, this is used to refer to the teacher's and students' disposition or tendency to respond positively or negatively towards teaching and studying Mathematics, as reflected in their rating to the attitude statement indicators.

Correlates. This term refers to bring into mutual or reciprocal relations (The New Webster Dictionary of the English Language, International Edition, 2004: 145). As applied to this study, these are factors related to the teacher,

students and home which may have significant relationship with the mathematics performance of second year student of integrated schools which are the contents of the three sets of questionnaire.

Educational attainment of parents. It is the acquired education of an individual to gain knowledge (Compton's Encyclopedia Vol. 7, 1996: 77). Operationally, this is the highest level of education obtained by the father and the mother of the student-respondents.

Educational background. This pertains to the level of educational attainment reached by the teachers of mathematics in integrated schools such as college graduate, with units in masters, master's degree, etc.

Extent of supervision provided by parents. This refers to the degree of participation by the parents of second year high school students in integrated schools in the education of their children especially in mathematics. In this study, this refers to the parent's rating of the 10-items in Part II of the Questionnaire for Parents.

Family income. It is the combined income of the father and the mother and other resources such as yield from agricultural lands. Operationally, it is the income of the whole family.

Grade. This term refers to standards of achievement (Microsoft® Encarta® Encyclopedia 2002. © 1993-2001 Microsoft Corporation. All rights reserved). In this study, this refers to the marks given by teachers for students' performance in subjects, like Mathematics, English, Filipino, etc.

General weighted average (GWA). In this study, this term refers to the average rating obtained by multiplying assigned weights to grades obtained and dividing by the total number of units/credits.

Home-related variates. In this study this refers to the characteristics of the home of the student-respondents such as their parents' age, parents' educational attainment, parents' religion, average family monthly income, household size, extent of supervision provided by parents to children's studies, and attitude of parents towards Mathematics.

Household. This refers to the number of individuals living in a house or dwelling (Microsoft® Encarta® Encyclopedia 2002. © 1993-2001 Microsoft Corporation. All rights reserved). In this study this refers to the number of immediate family members which includes parents and unmarried children and other relatives, house helpers living with the family.

Integrated schools. This refers to a school that offers a complete basic education in one school site and one school head and has a unified instructional program or they are educational institutions whereby the elementary department is fused into the secondary department, and conversely. According to Reid (2004: 1), integrated schools are often established to foster cross-cultural connections and greater racial understanding which aims to embrace different classes of students. As used in this study, this refers to public schools where the elementary and secondary departments are under one head/principal among

these are: Zumarraga IS, Cabungaan IS, Burgos IS, Tenani IS, Mualbual IS, Tominamos IS, and Guinsorongan IS in the Division of Samar.

Instructional redirections. This term refers to activities/objects/things used in instruction or instructional aids (Word Net, 1.6). In this study, this refers to actions taken to improve instructions.

Mathematics II. A subject in the second year high school students of integrated schools that deals with the concepts, processes, and skills in System of Linear Equations and Inequalities, Quadratic Equations, Rational Algebraic Expressions, Variation, Integral Exponents, Radical Expressions, Searching for Patterns in Sequences, Arithmetic, Geometric and others. In this study, it is applied to the mathematics subject offered to the secondary students under the revised secondary education curriculum.

Mathematics achievement test. This test is a measure of performance of an individual's achievement in Mathematics (Calmorin, 2005: 21 - 22). In this study, this is 50-item multiple choice test in Mathematics II which is used to determine the level of performance of the student-respondents. It cover topics on System of Linear Equations, Quadratic Equations, Rational Algebraic Expressions, Variation, Integral Exponents, Radical Expressions, Searching for Patterns in Sequences, Arithmetic, Geometric and others.

Mathematics performance. This refers to what a person does in school, as influenced by various factors other than what a person knows (Sevilla, et al., 1988: 23). In this study, this will refer to what a second year student in an

integrated school does in his mathematics subject. In addition, this will pertain to the average grade of second year student of integrated schools in a Division of Samar which is the final grade in mathematics in all the grading periods multiplied by the units for each subject then divided by the number of units.

Number of seminars and trainings attended. This is referred to as the frequency or count of seminars attended and trainings participated which will include the number of hours garnered.

Parent's occupation. It is a certain person's usual or principal work in which he earns a living (Random House Webster's Concise College Dictionary, 1999: 265 – 598). Operationally, it is the job or source of income which the parents of the student –respondents have.

Performance. This refers to the actual accomplishment as distinguished from potential ability (Good, 1973: 375). Operationally, it refers to the grades of the student respondents in Elementary Mathematics VI (grade VI mathematics), first year Mathematics, first year English, general weighted average (GWA) grade in first year and scores in the Mathematics Achievement Test.

Religion. This term refers to a way of life or belief based on a person's ultimate relation to the universe or a god or gods (Microsoft® Encarta® Encyclopedia 2002. © 1993-2001 Microsoft Corporation. All rights reserved). In this study the term is used as it is defined.

Sex. It is either of the two major forms of individual that occur in many species and are distinguished as male and female especially on the basis of their

reproductive organs and structure (Merriam Webster's Collegiate Dictionary, 2003: 1140). Operationally, it is the distinction of the student-respondents as male and female.

Student. This refers to the learners enrolled in an institution (Depedrsd@pacific.net.ph). In this study, it refers to the sophomore high school students enrolled in integrated schools in Samar for the SY 2008 -2009.

Students-related variates. In this study this refers to the student-respondents characteristics such as: age, sex, grade VI math grade, first year math grade, first year English grade, general weighted average grade in first year, study habits and attitude towards mathematics.

Study habits. This term means "the consistent patterns of behavior students used to do the work for his/her classes" (Aquino, 1988: 319). As used in the study, study habits refer to the behavior and ways of students in studying Mathematics.

Teachers. As defined, they are persons employed in an official capacity to the purpose of guiding and directing the learning experiences of students in an educational institution (deped-rsd@pacific.net.ph). Operationally, they are persons who guide and direct learning experiences in Mathematics of students in the seven integrated schools in Samar Division, who are respondents of this study.

Teacher-related variates. It is anything which is connected or in relation with the teacher (Merriam Webster's Collegiate Dictionary, 2003: 1050). In this

study this refers to the mathematics teacher-respondents characteristics such as age, sex, average monthly family income, highest educational attainment, teaching experience, teaching load, number of trainings and seminars attended, and attitude towards mathematics teaching.

Teaching experience. This term refers to the years served by teacher-respondent as a teacher in his/her current teaching job as well as previous job.

Teaching load. This term refers to the number of subjects taught by the teacher-respondent in his/her current teaching job which also include non-teaching assignments.

Variants. This term is synonymous with the word variables, a symbol that stands for anyone in a class of things. Variants refer to the characteristics of the students as to age, sex, family monthly income, etc.

Chapter 2

REVIEW OF RELATED LITERATURE AND STUDIES

The following discussions are excerpts from books, journals, periodicals, unpublished materials such as master's theses and dissertation papers, electronic and other sources that are relevant to the present study.

Related Literature

The discussion in this section are taken from the ideas of authors of books, journals and other reference materials that deal with performance in mathematics and the factors that influence it.

Human beings have the slowest maturation which is defined as the completion of growth and development within the organism and which also implies the unfolding of the organism's inherent traits or potentials (Sevilla, et al., 1988: 85). As such, they spend many years in the state of physical immaturity, depending on the care and protection of other people in order to survive. A comparison between a child and other species revealed that during the months the former is learning to walk and run with consistent steadiness, the latter have already grown to full maturity (Sevilla, et al., 1988: 85). Using the process of maturation as the basis, the interaction between heredity and environment becomes apparent.

The "Theory of Heredity" (nature) emphasized that all physical and psychological traits are transmitted directly through the genes from generation to generation, while the "Theory of Environment" (nurture) espoused that conditions outside the organism, except genes, influence behavior (Panopio, et al., 1994: 23). Both the genetic predisposition and the environment have significant contributions in human growth and development, as in the case of intelligence. Although, intelligence is genetically-related, if the child is born in an environment which is not conducive to the expression of this intelligence, then the manifestation of the child's intelligent potential will not be as much (Sevilla, et al., 1988: 84). Intelligence is defined as the over-all ability to act purposefully, to think rationally and to deal effectively with the environment (Davidoff, 1976: 12). A theoretical framework involving three conceptions of the nature of intelligence, namely: a) the goal direction of the mental processes involved; b) the ability to show adaptable solutions, and c) the capacity to show selectivity of judgment and self-criticism of choices was developed by two psychologist, Binet and Simon (Chaplin and Krawiec, 1979: 15). To them intelligence grows in parallel with the child's chronological age. This was obvious in the case of a child who passed all the items of the seven year level. This child is mentally seven years of age, regardless of his chronological age (Chaplin and Krawiec, 1979: 15). Thus, students will not have the same performance because there may be factors that influence how they do in school.

The study of Mathematics is a field of complexity or a formidable endeavor (Geary, et al., 2004: 363). A learning disability can results in inability to represent or process information in one or all of the mathematics domains or in one of the set of competencies within each domain. Learning disabilities in mathematics is complicated further by determining poor achievement as a result of poor instruction or poor achievement due to an actual disability (Geary, et al., 1991: 18). Hence, improvement in the quality and efficiency of mathematics education to minimize student's learning disabilities depends on the factors present in the teaching learning process (Doyle, 1990: 24).

Many different conditions affect the amount of an individual's learning. Some of these conditions are mental ability, degree of maturation, readiness, interest, attitudes, mental and physical health, previous achievements and social adaptability (Aquino and Razon, 1985: 202).

Attitudes of the students regarding mathematics have been considered to be very significant factor underlying their school experience and achievement (Gellor, 1999: 5). One probable factor why students do not seem to be making any significant progress in their class work especially in Mathematics is that teachers, of preceding year levels, failed to help their students acquire the needed attitudes toward school, study habits and study skills (Aquino, 1988: 319).

As with attitudes, it is not impossible to improve students' study habits in mathematics. Study habit is one of those probable factors why students failed or achieved low rating in Mathematics. Having in mind that Mathematics is

difficult and boring subject, some of them do not seem to be making ay significant interest towards the subject. Thus, there is a need for Mathematics teachers to develop the students' study habits and interest in dealing with numbers. This can be done by having students take study habits inventory in which they keep a record of when they studied what, for how long, where, and what subject and objective result. After collecting this data, teachers must be sure to discuss with students what good study habits are and what steps they can take to improve students' study habits Spriggs on his article said, "Let the student in Mathematics be taught that every mistake, every fault, every difficulty conquered, becomes a stepping stone to better and higher things. It is through such experience that ever made life worth living has achieved success" (Spriggs, 202: 99-100).

Spriggs stated on his article that aside from students' attitudes; students' study habits are also an important factor to be considered in order for the students to achieve high ratings in Mathematics. Teachers must find solutions so as to develop the students' habits in studying Mathematics.

It is the responsibility of every Mathematics teacher to make students successful in school as they possibly can be. Johnson (2000: 10) suggested the following: 1) teacher's appreciations of mathematics as remarkable subject must be real and deep; 2) teacher's attitudes toward students must be sympathetic and understanding; 3) teacher's interest in learning must be great and his enthusiasm for teaching sincere; 4) teacher needs to be the kind of person they accept and are

willing to imitate; 5) teacher must work for them with patience and kindness so that each day each student has some success; 6) to make learning mathematics a privilege rather than a punishment, and 7) to assign tasks that are within the range of the student's ability.

There are some teachers' characteristics which are positively associated with students' learning in mathematics such as the: a) the percentage of teachers in the school that are qualified to teach mathematics; b) an enriched mathematics curriculum; c) the frequent used of textbooks by teachers, and d) the time spent in maintaining order in the classroom (Dowling, 1976: 952). Also, there are desirable qualities of teachers that influence performance, they are: a) a good knowledge of subject matter; b) good knowledge of the nature of the child; c) capacity to think and speak clearly and intelligently; d) pleasant personality; e) freedom from any impediment that would interfere with the teacher usefulness, and f) classroom skills (Gregorio, 1988: 525).

Teachers should thus uphold the highest competence which loosely means the ability of teachers to apply psychology to stimulate students' interest and sustain their attention and concern. It also refers to the development of critical thinking using non-threatening manner of lesson presentation while providing them with maximum involvement in class activities (Weihert, et al., 1992: 92).

Finally, the home is the primary institution that makes students realized the value of education should be considered in assessing the performance of the

students in Mathematics (Panopio, et al., 1994: 56). The family is responsible for the initial education of students in order to be productive members of the society (Omas-as, et al., 2003: 135). There is a school and family partnership which is a recognition that: a) the two institutions share major responsibilities for children's education; b) that the importance and potential influence of all family members cannot be underestimated, and c) that a formal alliance and contractual agreement to work towards shared goals and to share the profits or benefits of mutual investments is necessary (Aquino, 2003: 466).

Sections 14 and 15 of the Education Act of 1982 enumerated the duties and obligations of parents and teachers, to wit: a) parents shall cooperate with the school in the implementation of the school program, curricular and co-curricular activities, and b) teachers shall be accountable for the efficient and effective attainment of specific leaning objectives in pursuance of national development goals, within the limits of available resources. It is thus evident the influence on students' achievement of the family.

Lardizabal, et al. (2000: 11-12) stressed that the teachers should maintain harmonious and cooperative relationship with parents. This relationship should be kept constant and continuous to inform the parents of their children's progress and problems in school. It is clear that some factors such as the home influence school mathematics performance.

The cited literature provide basis for the conduct of this study.

Related Studies

Among all of the research studies reviewed by the researcher, the following were found to be of value to the present study; hence, they were summarized here.

In the study entitled "Correlates of Mathematics Performance of Sophomore Students of Malabon National High School", Gonzales (1999) aimed to get the correlation between students' profile, parents' socio-economic status and school factors and Mathematics performance of 658 sophomores of Malabon National High School (Main), Potrero Annex and Panghulo Annex. Using the Questionnaires, teacher-made test and interview as tools in gathering the needed data, the research revealed the following findings: a) a typical sophomore student of Malabon National High School is 14 years of age, has average level of performance in Mathematics; b) there is no significant correlation between performance in Mathematics and age, gender, father/mother occupation, father/mother highest educational qualification, monthly income of the family, residence while studying and distance of house from school, and c) significance correlation exists between the respondents, performance in Mathematics and size of the family, number of hours devoted in studying, honors/awards received and class size.

The two studies are similar for several reasons. First, they are both correlation analysis. Second, they both involved second year high school students as respondents. Third, they both deal with mathematics performance.

However, while the study cited here focused on the correlation between mathematics performance and student's profile, parents' socio-economic status and school factors, the present one will concentrate on the correlation between mathematics performances and teacher-related factors, student-related factors and home-related factors. Also, the study mentioned here was conducted in a national high school whereas the present study was done in integrated schools of the Division of Samar.

Baldecasa (1999) conducted a research that correlated the grade six pupils' mathematics achievement with pupils' factors such as attitude towards mathematics, socio-economic status and teacher factors such as educational attainment, length of service in teaching mathematics and performance rating. With 272 grade six pupil-respondents in Pasay East District during school year 1998-1999 and the questionnaires as the main instrument in gathering the needed data, the study showed that students with average aptitude in mathematics have positive attitudes towards Mathematics. It also revealed that the socio-economic status of the family greatly affects the grade six pupils' learning capacity in mathematics, a big percentage of the grade six mathematics teachers were educational qualified with more than ten years experience and rated "very satisfactory" performance and the teachers' length of service in teaching mathematics, educational attainment and performance rating affects the achievements of pupils in mathematics.

The study of Baldecasa bears resemblance with the present study considering that it correlated mathematics achievement with some teachers and pupils' factors such as educational attainment of teachers, teaching experience in mathematics of teachers and attitudes toward mathematics of pupils. They differed, however, in that the previous study had the grade six pupils of Pasay East District as respondents whereas the present study will have the second year high school students of integrated schools in the Division of Samar as respondents.

Reyes (1999) conducted a research entitled "Correlates of Mathematical Achievement of Pupils in Area II Division of City Schools, Mandaluyong City", which employed the descriptive method of research, the study disclosed that majority of the pupils were seven years old have preparatory education and grade point in Mathematics varies from average to above average. It also found out that pupils show their strengths on the following skills: a) count by 1's through 100; b) tell the relationship of numbers using less than; c) join two sets with one to nine objects; d) add two-digit numbers without regrouping; e) separate a group of objects into halves/fourths; f) identify common objects according to color, and g) describe shapes/figures that shows symmetry.

Weaknesses of the respondents were on the following skills: a) add two-digit numbers with re-grouping; b) tell the relationship of numbers using greater than; c) subtract two-digit numbers with minuends through 99 with re-grouping, and d) analyze word problems and solved what is asked for and state the

complete answer. According to the teacher-respondents, the possible causes of mathematical weaknesses of pupils were: a) poor reading comprehension; b) poor English vocabulary; c) absenteeism/tardiness; d) low educational attainment of parents, and e) inability to understand number concepts.

Reyes' study is cited here insofar as it is a correlation study about mathematics performance. They, however, differed in that the respondents of the previous study were grade I pupils whereas those of the present study are second year high school students of integrated schools.

Pilar (1999) on his study "Determinants of Academic Performance in Mathematics of First Year and Second Year College Students, North Western College, Laoag City, 1999" identified the factors affecting the achievement among first year and second year college students. She revealed that the study habits, attitudes and high school grade point average were the factors that substantially determined the extent of the students' achievement in mathematics.

She found out that presence of some learned household members had good effects on the study habits of students. The following also moderately affected academic performance of the students: type of food, style of preparation, kind and amount of food intake, availability of educational facilities and supplies such as books, teaching materials, references, supply of water and electrical facilities. Poor clothing, shoes and sports wear deprived their participation in extra and co-curricular activities and medical aid was also inadequate.

Other significant findings of the study were: a) ventilation and access to

educational media positively affected academic performance; b) recreational activities are but done on off hours hence less felt by students, and so has little effect on their academic performance; c) students, parents and teachers were of similar perceptions on the effect of socio-economic factors on students' academic performance, and d) irregular attendance of students was generally caused by low income, unemployment, etc.

The similarity of the present study and the previous study cited here was on the research design used: descriptive-correlational. While the study of Pilar correlated socio-economic status and academic performance of the students, the present research correlated student-related factors, teacher-related factors and home-related factors to the students' performance in Mathematics.

Nacario (2004) in his study entitled "Correlates of Student's Performance in Differential Calculus (Math 214)", attempted to determine the intellective and non-intellective correlates of achievement of sophomore engineering students in Differential Calculus (Math 214).

Among the significant findings of the study are: 1) the intellective factors namely College Entrance Test, Achievement in College Algebra, Achievement in Trigonometry and Solid Mensuration, Achievement in Analytic Geometry, Achievement in Communication Arts (English 113), and Achievement in Advanced Communication Arts (English 123) were found to be significantly related to performance in Differential Calculus; 2) of the non-intellective factors only attitude towards Mathematics was found to be significantly related to

student's performance in Differential Calculus. Sex, age, monthly income of parents, educational background of parents and type of high school attended were not significantly related to student's performance in Differential Calculus, and 3) the intellective factors were found to predict students' achievement in Differential Calculus to a certain extent.

The study of Nacario bears similarity to the present study since both studies were on finding correlates of Mathematics performance. The two studies differ in respondents involved and Mathematics subject considered.

Tabones (2003), in a study entitled "Correlates of Performance of Pupils in the Monograde and Multigrade Classes in the Districts of Wright I and II", attempted to determine the factors related to the performance of pupils in the monograde and multigrade classes in Wright I and II.

The study revealed that both the monograde and multigrade pupils had a favorable attitude towards schooling, both the monograde and multigrade pupils had assess themselves to have good study habits.

The study also revealed that both monograde and multigrade teachers have neutral attitude. Both the monograde and multigrade teachers had assessed themselves to have "high mastery" on the lessons they taught. Monograde and multigrade schools had school facilities, equipment and instructional materials, such as classrooms, comfort rooms, playground and garden, stage, library and others.

Moreover, in multigrade classes, grades IV and V topped in MPS and the lowest in MPS were in grades I and II. Across learning areas, still Sibika/HEKASI and Filipino had the greatest MPS. MSEP and Math obtained the lowest MPS, respectively.

The two studies found similarities in terms of research design used. They also found relationship in terms of some variates used. However, they differed in the sense that the previous study compared the achievement of pupils in monograde and multigrade classes, while the present study focused on other factors that affect Mathematics performance of students from integrated schools in the Division of Samar.

Azanza (2003), in his study entitled "Parenting Style and Pupils' Academic Achievement", found out that there was a significant relationship between parenting styles of parents with the pupils' academic achievement.

Their professed "often practiced" beliefs were centered on democratic ideals, favoring the development of children into smart, responsible, vocal and active participants in their own development. The parenting belief they admitted not practicing were: not listening to their children, playing favorites, verbal abuse, and discouraging from expressing their opinions. The parents' economic status was between low and average. In general, these parents were interaction lists, interventionists and a minority who was non-interventionists. Many parents usually intervene in their children's affairs, although a few do not. The parents' perception of their parenting styles was aligned with the pupils'

view of their parents' parenting styles.

The previous study was cited here because it used the descriptive-correlational research design which was also used in this present research. However, the two studies differ in the sense that the previous study of Azanza correlated parenting styles and pupils' achievement whereas the present study will correlate the student-related factors, teacher-related factors, and home-related factors.

Bade (2003), in a study entitled "Correlates of Low Performance of Teachers in the Revised Performance Appraisal System for Teacher (RPAST)", revealed that the following factors were found to highly affect the learners' achievement: students' attendance and attitude towards schooling, teachers' educational qualification, and effective integration of teaching strategies.

It also found out that the following factors were found to highly affect the teachers' performance: educational qualification and major/specialization of the teachers, students' attendance in school, and parents' educational attainment. Teacher-related factors, student-related factors and home-related factors were revealed to have significant correlation with teacher performance, while learners' achievement was found to be influenced by teachers' performance.

The student respondents were shown to perform better in Filipino-taught subjects (Filipino, Values Education and Social Studies) than in English-taught subjects (Mathematics, Science and Technology, and English). The general achievement level of these students was low/poor, based on the targeted base-

line proficiency level of 75 percent rating.

In the previous study, the researcher determined the factors that influence the low performance of the teachers in the Performance Appraisal System for Teachers (PAST). In the present study, the researcher will determine the factors that influence (or those factors that are significantly related) the Mathematics performance of sophomore students from integrated schools in the Division of Samar. It was cited here as it gave insights into the present study in terms of scope, subject matter, and respondents of the study.

In a study entitled "Internet-Enhanced Application and Enrichment Activities: Their Effects on the Mathematics Performance of College Students", Segun (2000) used an experimental research design to compare the relative effectiveness of the two strategies, namely: a) Internet-enhanced activities, and b) traditional book enrichment and application activities on the mathematics performance of college students.

It revealed that there was improvement in the mathematical skills of the students exposed to internet-enhanced activities than those exposed to the traditional book enrichment and application activities. In addition, it found out that the experimental and the control groups were comparable at the start and at the end of the intervention since no significant differences were found out between their pretest and posttest scores. In terms of the pretest and posttest results within groups, significant differences were found in each group. The differences in the post-treatment mathematical skills between the two groups

showed significant differences in favor of the students exposed to Internet-enhanced enrichment and application activities.

On the bases of the findings of the study, it concluded that the use of the Internet could effect more improvement in mathematical skills than the traditional book enrichment and application activities.

One of the manifested differences of the two studies is the use of experimental design in the previous study, as opposed to the descriptive-correlational design, which was utilized in the present study. In addition, the previous study of Segun broadly covered the field of mathematics, with particular emphasis on the development of mathematical skills on the part of the student-respondents of the study. The present investigation focused on the level of achievement in Mathematics of sophomore students in integrated schools.

In spite of the foregoing discussions of dissimilarities, the two studies found a certain commonality, that is, their level of mathematics achievement. The previous study dealt with Internet-enhanced application and enrichment activities as they affected the students' mathematics performance while this study investigate student-related variates, teacher-related variates, and home-related variates affect the mathematics performance of the sophomore high school students.

In a study entitled "The Relationship of Mathematics Performance of the Second Year Students to their Level of Anxiety in Mathematics", Cunanan (1999) showed that 75 percent of the respondents had poor mental ability with high

level of anxiety in the area of social responsibility and high level of anxiety emotionally, and high level of anxiety in numerical test.

It also found out that the mathematics performance of the students was significantly related to their levels of mathematics anxiety in the three areas. The study showed that the poor performance of students in mathematics is due to their high level of mathematical anxiety.

On the basis of the research findings, the researcher recommended that school administrators together with mathematics teacher should formulate and provide activities that will lessen the mathematics anxiety of the students.

Given that the previous study aimed to determine only the relationship of the mathematics performance of second year students with their levels of anxiety in mathematics in the areas of social responsibility, emotional and numerical test anxiety, it is therefore different from the present study. The present study correlated not only the respondents' achievement in mathematics but also their teachers' attitudes toward mathematics teaching and some personal variates.

In addition to the foregoing, Cunanan's study also differed in terms of respondents of the study, instruments used in gathering the needed data as well as in terms of statistical tools used. Yet, it is cited here as it provides baseline information how mathematics achievement correlated with variables such student-related, teacher-related and home-related.

Gayem (2000) conducted a study entitled "The Effect of Computer-Aided Instruction in the Performance in Mathematics of Grade Six Pupils in Malinta

Elementary School". The findings showed that: a) the pupils in the two groups have the same prior knowledge and performance as shown by the pre-test results; b) both groups have improved mathematics performance as indicated in the post-test results, and c) there is no significant difference in the mathematics performance of the two groups.

The researcher recommended a follow-up study be conducted over a larger span of time, on a larger scale and bigger sample size so that more defined results may be observed.

The use of mathematics performance as variate in the previous study made it relevant to the present study, which also used it as a variate.

In the study of Cabrales (2000) entitled "Correlates of Attitudes towards Selected Filipino Values of Fourth Year High School Students in the First District of Leyte: Implications for Curriculum Enrichment in Values Education", it concluded that the attitude of today's students have degenerated and was not acceptable. It was found that student nowadays still give value towards the same Filipino values that were given much weight before.

The previous study was similar to the study at hand since both dealt with the attitudes of respondents. On the other hand it differs on their basis of correlation since the previous study attitude have been correlated towards Filipino values while the recent study will correlate attitude of the students towards Mathematics to the profile variates of the students, teachers' profile variates and parents' profile variates.

In the study of Pacadaljen (2003) entitled "Attitude of the College Student towards the Physical Education Program of SSPC: Basis for Instructional Redirection", it attempted to assess the attitude of the college student towards Physical Education in order to improve their participation in the classroom with respect to course content, teaching strategies, instructional material and facilities and evaluation. It was found out in this study that there is no significant relationship between the students' attitude towards PE and their age participation in activities in contests. The study arrives also at the conclusion that there is a moderate or substantial relationship between attitude towards PE and their average grade in PE. The researcher recommended another study proving student's attitude that maybe correlated with their achievement in Physical Education maybe undertaken. It is similar to the present study to be conducted since it both deals with the attitude of the students towards certain subject or schooling and also somewhat similar in their aims, while the previous aimed to improve the students' classroom participation the recent study aim to improve their academic performance. It differs in a since that in the previous study, it focused in only one subject matter while the recent study has broader focus since it included attitude towards mathematics of students, teachers and parents, study habits and correlated it to mathematics performance.

In the study of Bulan (2005) entitled "Correlates of Study Habits of Grades VI Pupils Inputs to Enhancement Strategies", the study habits of the pupils were correlated to their parents attitude towards education, pupils height, attitude

towards schooling, reading ability and teachers attitude towards teaching, performance rating and their strategies to develop pupils study habits.

It is similar to the recent study conducted since both focused on the study habits of the learners and included attitude towards schooling. It differs in a lot of ways. In the previous study the main respondents are the Grade VI pupils while the recent study would focused on the second year high school students. In the recent study, attitude and study habits are variates to be considered and also to be correlated with performance in mathematics, unlike on the previous study that the study habits is the major variates while attitude is only one of the correlates. In the scoop and the delimitation of the previous study three groups of respondents were considered – pupils, parents, and teachers. On the other hand, Bulan's study focused on the study habit which was correlated to the parents' attitudes and teachers' teaching performance and their strategies in promoting the pupils study habits, the present study was centered on students' Mathematics performance which might be affect by their study habits.

Meanwhile, in a research which was conducted by Taylor (2004), it was revealed that significant within-class gender differences were found in four areas of the learning environment, namely: a) student cohesiveness; b) task orientation; c) cooperation, and d) equity, but no gender differences in attitudes were found. All four learning environment areas were perceived in a more favorable light by females than by males. Individual gender differences were similar, with a significant difference also being found in teacher support, as well as both types

of mathematics anxiety, namely, learning mathematics anxiety (LMA) and mathematics evaluation anxiety (MEA).

While no association between the learning environment and mathematics evaluation anxiety was found, there were significant associations between learning mathematics anxiety and three areas of the learning environment, namely, student cohesiveness, task orientation, and investigation. Furthermore, it found out significant relationships between the normality of mathematicians attitude scale and the learning environment scales.

Qualitative data analyses confirmed relationships between anxiety, attitudes, and classroom learning environments. The data also suggest that the structure of the mathematical content is linked with the level of anxiety that high school students feel.

Despite of the fact that the preceding investigation was done in a foreign research environment, they are nevertheless similar considering that both studies are concerned with finding the relationship between classroom environment and mathematics anxiety and attitudes.

Another study worthy of note in this present study was conducted by Kiamanesh (2004). In this study, math self-efficacy, math self concept, perceived usefulness of mathematic, math anxiety and gender were employed as main predictors of math achievement. Using regression analysis and path analysis method, the math self-concept and math anxiety was highly correlated.

The results showed that math self-efficacy is a strong predictor of math achievement compared to math self-concept, perceived usefulness of mathematics and gender. The direct effect of math self-concept and perceived usefulness of mathematics on math achievement was not significant. The mediating role of math self-efficacy between gender, math self-concept, and perceived usefulness of mathematics and math achievement was confirmed.

Meantime, the regression analysis showed that math self-concept and gender explained significantly 8.6 and 3.8 percent of the variance in the math achievement score, respectively. The difference between males and females in math self-efficacy, math self-concept and math achievement were significant. However, the difference between perceived usefulness of mathematics for both genders was not statistically significant.

The similarity between the previous study and the present one lies on the use of mathematics anxiety and gender as predictor variables of mathematics achievement. However, the present study will not go to the extent of determining the relationship between math self-efficacy, math self-concept and perceived usefulness of mathematics and math achievement.

Finally, the present study reviewed the research conducted by Acelajado (2003) which was designed to determine the effects of using technology, specifically graphing calculators, on students' achievement in College Algebra, attitude, and anxiety in mathematics.

With the use of pretests and posttests in College Algebra, Mathematics Attitude Scale (MAS) and the Mathematics Anxiety Rating Scale (MARS), it revealed significant differences in the achievement, attitude, and anxiety of the different ability groups in favor of the high ability group. No significant difference existed between the levels of anxiety of the three groups of students, although the use of graphing calculators was found to reduce their anxiety scores.

Graphing calculators were most helpful in the study of functions and their graphs and systems of equations. Positive effects of using graphing calculators include students' improved achievement, reduced anxiety in mathematics, increased self-confidence, and active involvement of students in the learning process.

Both studies center on achievement in mathematics and the respondents' attitudes and anxiety in mathematics. Both studies want to find out whether attitudes and anxiety in mathematics influence the respondents' achievement in the same subject. Nevertheless, the present study will not go beyond describing the relationship between the respondents' mathematics achievement and their mathematics anxiety as well as their teachers' attitudes toward mathematics teaching.

Although the foregoing studies differ in several respects with the present study, they are nevertheless cited here as they touched on mathematics anxiety, attitudes toward the subject and mathematics achievement.

Arcueno (2004), in a study entitled "Socio-economic Status of Parents and Pupils' Academic Performance in the District of Mondragon, Northern Samar: Basis for Instructional Redirections", used the descriptive-correlational research design to determine the relationship between the socio-economic status of parents and the academic performance of the pupils.

The study revealed that the relationship between the socio-economic status of parents and the academic performance of Grade VI pupils in the five subject areas was insignificant which means that there was no significant relationship between the socio-economic status of parents and the academic performance of Grade VI pupils.

The study concluded that the three groups of respondents, namely, pupils, parents, and teachers, differ on their perceptions on the effects of socio-economic status indicator on the academic performance of the pupil. It also concluded that the poor academic performance of the Grade VI pupils is contributed by various indicators such as family income, educational facilities, and others.

The study cited here was similar to the present study in the sense that both employed the descriptive-correlational research design. But, while the previous study determined the relationship between the socio-economic status of parents and pupils' academic performance in the District of Mondragon, the present study correlated student-related factors, teacher-related factors and parent-related on Mathematics performance of the student-respondents.

Muncada (2002) conducted a study entitled "The Academic Achievement of First Year Students in English and the Teachers' Performance in the Congressional District II of Northern Samar: A Correlation".

The foregoing study concluded that: a) the perceptions of the two groups of respondents on the level of performance of English teachers along communication with learners, classroom management, personality/personal conduct and behavior, and professionalism had no significant difference, thus the acceptance of the null hypothesis on this aspect; b) on the instructional competence of teachers, the perception of the two groups of respondents did not vary, meaning that the teachers and students have nearly the same assessment; c) a remarkable difference was shown in the comparison between the perceived performance of the teachers and their RPAST rating; d) the academic performance of students is not significantly related to the teachers' perceived performance; e) the academic achievement of first year students in English is not influenced by the kind of rating their teachers received under the RPAST for teachers, and f) there is no relationship between the performance of English teachers and their profile as to their age, sex, educational background, length of service, and number of training hours attended, meaning that the performance of teachers is independent from their personal variates in this particular study.

Inasmuch as both studies employed correlation analysis, they are thus related to each other. However, while the previous study correlated the academic achievement of first year students in English and their teachers'

performance, the present research correlated the teachers' and parents' supervision on their children's studies and how they affect their academic performance.

The study also finds significant relationship with the study conducted by Ramirez (2004) entitled "Home Management Styles, Classroom Management Styles and Academic Performance of Grade I Pupils", aimed at assessing the home management styles, classroom management styles and academic performance of Grade I pupils.

The study concluded the following: a) as regards the home management style of parents, the perceptions of the grade I pupils and their parents did not differ significantly; they "agreed" of such roles of parents as pal, counselor, athletic coach, and police officer; they differed significantly on their perception of parents as martyr; b) relative to the classroom management style of teachers, the grade I pupils and their teachers had essentially similar perceptions on the teacher as martyr, pal, counselor, athletic coach and police officer; c) home management styles of parents did not appear to be influenced by the educational background of parents, their occupation and monthly income, and d) classroom management styles of teachers were generally not influenced by the teachers' age, years of service as teachers, particularly as grade I teachers.

The use of the home as one of the variates in the previous study and the use of parental supervision as one of the variates in the present study made the two studies related. More importantly, however, the relationship between the

two studies laid on the research design used, that is, descriptive-correlational research design.

The difference was that the previous study determined the relationships among the home management styles, classroom management styles and academic performance of Grade I pupils in Eastern Samar whereas the present study intends to ascertain the relationships among the extent of teacher supervision, parental supervision and academic performance of Grade III and Grade VI pupils of Matalod Elementary School, Blanca Aurora Elementary School, and San Jorge Central Elementary School in San Jorge District. Also, the two studies differed in terms of variates employed and subject matter studied.

Furthermore, Froilan (2002) conducted a study entitled "Influence of Some Teacher and Other Related Variables on Senior Students' Attitude and Achievement in P.E.".

The said study revealed the following findings: a) the majority of the fourth year P.E. teachers in public secondary schools were neither major nor minor in P.E. or PEHM; but had favorable self-assessment of their attitudes towards P.E. although their attitudes were moderately favorable; b) the P.E. teachers rated their strategies in teaching P.E. as "effective" but this was seen as only "moderately effective" by the students; c) while the teachers and administrators rated the teachers' teaching performance "very satisfactory", the students rated it as "satisfactory", and d) the school administrators found their

administrative and supervisory practices satisfactory but the teachers found them moderately satisfactory.

Other major significant findings of the study were as follows: a) a significant relationship was found between the students' attitudes towards P.E. and all the teacher- and other related variables and between the students' written achievement in P.E. and the teacher- and other related variables; b) the students' performance in practicum were found to be significantly related to teaching performance, budget for P.E. and administrative and supervisory practices, and c) a significant relationship was likewise found between the students' overall achievement in P.E. and strategies in teaching P.E., teaching performance, budget for P.E. and administrators' attitudes toward P.E., and students' attitudes and achievement in P.E.

The study is cited here as it found relevance with the present study in terms of its determination of teacher-related factors that influenced academic performance of learners in particular subjects. The present study was concerned with teacher supervision as one of the variates, which might have significant relationship with the academic performance of the pupil-respondents of this study. However, the previous study was different from the present research in terms of the other variates used, research locale, research respondents and nature of the subject matter under consideration.

The different researches mentioned and discussed in this study were relevant to the present research in terms of some variates used – that is,

Mathematics performance of pupils. It is for this reason that they are cited here in spite of the manifest differences in terms of respondents involved, research locale and nature of the subject matter under consideration.

Baco (2000) in her study on "Proficiency in English as a Correlate of Grade V Pupils' Performance in Science and Mathematics," found out that there is a significant relationship between the grade V pupils' overall performance and their achievement in English, Science, and Mathematics. It can be said that the overall performance of the grade V pupils are influenced or affected by their achievement in the three learning areas.

Based on her study, she conducted that the problems that beset the grade V pupils were focused on the difficulty level and scarcity of reading materials, textbooks, and references in English, Science, and Mathematics, and the inadequacy of teachers in using English and the need to improve the communication skills. She recommended that the teachers should intensify their teaching of Mathematics wherein innovation and effective teaching strategies should be utilized and should be reinforced with instructional aids.

Realizing that proficiency in English affects the achievements in Science, a Reading Enhancement Program on Reading for specific purposes be conducted were teachers can be taught reading in content subject like Science.

The study above is similar to the present study in a way that the proficiency in English is correlated with the student-respondents'

performance in Mathematics. It differs in a way that English is correlated to both Science and Mathematics on the former study while on the recent study will be between English and Math only. In addition, the present study's subject will be the second year high school students' of integrated schools in the Division of Samar while the former one focused on the grade V pupils of Wright I and II Elementary School.

Amante (1999) investigated common deficiencies in College Algebra among engineering students of Samar State University. She concluded that age, sex, socio-economic status as well as study habits were not the factors related to the proficiency of the first year college students in College Algebra. Instead, students' attitude towards Mathematics, their mathematical background, performance in college admission test and language proficiency could make a difference on how they will perform in College Algebra.

The above study is the same with the present study because both investigate factors related to respondents' performance in mathematics. They differ with one another since the subject of the former study was the 1st year college engineering students while the present study is high school sophomore students. The method of teaching in algebra in high school mathematics is only part of achievement of the students in college algebra.

The studies reviewed provided the researchers sufficient background to go on with the present study.

Chapter 3

METHODOLOGY

This chapter presents the methods and procedure used in the conduct of this study. It includes a detailed description of the research design, instrumentation, validation of the instruments, sampling procedure, data gathering procedure and statistical treatment of data.

Research Design

This study used the descriptive correlational research design. The descriptive method was used to describe and explain the level of mathematics performance of second year high school students of integrated schools in the Division of Samar, and the correlates or factors, namely: student-related factors, teacher-related factors and home-related factors.

Correlational research design was used to explain existing relationship between two variables. One of the variables in this study is the level of mathematics performance of second year high school students of integrated schools in the Division of Samar. The other variable is the factors affecting the level of mathematics performance, namely: student-related factors, teacher-related factors and home-related factors.

The instruments used are questionnaires (for the three groups of respondents), Mathematics Achievement Test (for determining level of

performance in Mathematics of the student-respondents), and documentary analysis (school records such as Form 137-A and Principals Report of Enrolment) for obtaining accurate data on the student-respondents grades in Elementary Math VI, HS Math I, HS English I, GWA in First Year, and others.

The data gathered were analyzed using appropriate statistical tools such as the frequency counts, percentage, mean, weighted mean, standard deviation, Pearson Product Moment Coefficient of Correlation and Fisher's t-test.

Instrumentation

The instruments used were a researcher-made questionnaire for the three groups of respondents of the study, a Mathematics Achievement Test to determine the level of mathematics performance of the student-respondents, and documentary analysis which include school documents such as Form 137-A and the Principal Report of Enrolment.

Questionnaire. There were three sets of questionnaire one each for the student-respondents, teacher-respondents and parent-respondents.

The questionnaire for the student-respondents contains items which will generate data on the profile of the student-respondents which will answer specific problem number one. This contains three parts. Part I ask for the name, age, sex, grade VI math final grade, Math I final grade, English I final grade and general average in first year. Part I is a supply type wherein the respondents supply the information ask for by writing in the blank spaces provided. Part II-

Students Study Habits in Mathematics, this contains 20 study habits statements in which students rate each statement-indicator of their study habits in Mathematics by using a 5-point scale, where: 5- always practiced, 4 often practiced, 3- sometimes practiced, 2- rarely practiced and 1- not practiced. Part III-Attitude towards Mathematics, this contains 20 statements of students' attitude towards Mathematics. The students were provided a 5-point scale for rating their attitude towards mathematics, where: 5- strongly agree/very highly favorable attitude, 4-agree/highly favorable attitude, 3-neutral/moderately favorable attitude, 2-disagree/less favorable attitude, and 1- strongly disagree/not favorable attitude.

The questionnaire for the teachers, this contains items which would be the source for data to answer specific problem number two of the study on teachers' profile. The questionnaire contains two parts. Part I ask for the mathematics teachers' name, age, sex, average family income per month, educational background, teaching experiences, teaching load and number of relevant seminars and trainings attended. Part I is supply type, respondents were made to supply information. Part II -Attitude towards Mathematics Teaching, this contains 10 statements of teachers' attitude towards Mathematics teaching. The teacher-respondents were provided a 5-point scale for rating their attitude towards mathematics teaching, where: 5- strongly agree/very highly favorable attitude, 4-agree/highly favorable attitude, 3-neutral/moderately favorable

attitude, 2-disagree/less favorable attitude, and 1- strongly disagree/not favorable attitude towards mathematics teaching.

Questionnaire for Parents, this questionnaire would generate answers to specific question number three on home profile of the student–respondents. This questionnaire was responded by either the father or the mother of the student-respondents. This was brought home by the students during their lunch break and those whose parents were not in their homes during the time of the administration arrangement were made to retrieve at a later date and time. This contains three parts. Part I which is a supply type ask for the names of the father and the mother, their ages, educational attainment, and religion. It also asked for the average monthly family income, and household size. Part I is a supply type wherein the parent-father or mother fill in the data needed. Part II-Parents Extent of Supervision provided on their children's studies. This contains 10 – statement indicators of the parents' extent of supervision provided on their children studies. The parent-respondents were provided a 5-point scale for rating their extent of supervision provided on their children studies, where: 5-strongly agree/to a very much extent, 4-agree/to a much extent, 3-neutral/to a moderately extent, 2-disagree/to a less extent, and 1- strongly disagree/to a very little extent. Part III-Attitude towards Mathematics, this contains 10 statements of parents' attitude towards Mathematics. The parent-respondents were provided a 5-point scale for rating their attitude towards mathematics, where: 5-strongly agree/very highly favorable attitude, 4-agree/highly favorable attitude,

3-neutral/moderately favorable attitude, 2-disagree/less favorable attitude, and 1- strongly disagree/not favorable attitude.

Mathematics achievement test. The researcher constructed a 60-item test in Mathematics II on the topics, System of Linear Equations, Quadratic Equations, Rational Algebraic Expressions, Variation, Integral Exponents, Radical Expressions, Searching for Patterns in Sequences, Arithmetic, Geometric and others. The test items were taken from previous years (2006, 2007 & 2008) Division Achievement Test in Mathematics II and from the National Achievement Test in Mathematics Reviewer and NCAE Reviewer. Thus, the items included are parts of validated tests, the researcher still undertake validation procedures. A table of specification covering topics in Mathematics II was prepared. The selected test items were classified and categorized as to topic and levels of cognition adapting "Blooms Taxonomy". The test is a multiple choice type of test distributed to different cognitive abilities, such as, knowledge, comprehension, application and higher than application. After the item analysis conducted, a final draft of 50-item test was developed which was administered to the student-respondents. After which it was checked and validated by her adviser and some mathematics teachers are proficient in the content. It was shown also to the Mathematics II teachers of Samar National School.

The test was given to the second year high school students of Silanga National School, Catbalogan, Samar for test-retest validation.

Documentary analysis. This instrument was used in obtaining student-respondents grade VI math final grade, Math I final grade, English I final grade and general weighted average grade (GWA) in first year. DepEd Form 137-A or the Student Permanent Records was used. This was utilized for verifying respondents' responses through the questionnaire. To secure these forms (DepEd Form 137-A) the researcher asked permission from the principal's office and from the advisers of the second year high school students of Integrated School covered in this study.

The other school reports needed like the "Principal's Report of Enrolment" was used in determining the population of the teacher-respondents and the student-respondents of the study.

Validation of the Instrument

The researcher employed separate procedures in the validation of the instruments as follows:

Mathematics achievement test. After the researcher constructed a 60 item test, it was shown to some mathematics teachers for criticism and comments for improvement of the constructed test, then he passed it to his adviser for her expert scrutiny, after the correction of the research advisers are incorporated, the questionnaire will be finalized and prepared for pilot testing.

The test was pilot-tested among 45 students of Silanga Integrated School since it was once an integrated before and now it is Silanga National High School.

The first administration of the test was done on January 2009, and one week after, the second administration was made. After which, a computed correlation of 0.88 proved was obtained, the reliability of the instrument were fairly high, adequate for individual measurements.

The result showed that the 50 test items were of average difficulty, and were all good items, this must be because this test items were from validated test.

Questionnaire. The first draft of the instrument which consisted of three parts, Parts I, II, and Part III for the student-teacher respondents and Part I and Part II for the teacher-respondents was presented to the adviser and mathematics teachers of Samar National School for comments and suggestions. The second draft of the questionnaire was tried out to 25 randomly selected second year high school students of Silanga High School on January 2009 to further ascertain its reliability and two mathematics teachers and 25 parents. The questionnaire for parents was also, tried out to the parents of the student-respondents in the validation. After one week, a second try-out was done to the same group. The results was tallied, computed and interpreted utilizing the guide suggested by Ebel (1965: 242).

Sampling Procedure

The researcher went to Samar Division to find out the number of integrated schools and the number of second year high school students enrolled in the integrated schools in Samar Division and the number of second year mathematics teachers teaching Mathematics II in the different integrated schools.

The researcher considers including all integrated schools since there were only seven of them, so, total enumeration sampling was used for the schools. For the student-respondents stratified sampling was used. Based on the report of enrolment submitted by the principal of the different integrated schools for January 2009 the number of second year students enrolled were as follows: Zumarraga IS has 75 second year students, Cabungaan IS has 41, Burgos IS has 108, Tenani IS has 44, Mualbual IS has 59, Tominamos IS has 211, and Guinsorongan IS has 91 or a total of 629 second year students were enrolled for the school year 2008-2009. Using Sloven's formula the adequate sample size is 245 students out of the 629 student-population, but in the study there were 281 student-respondents, because in integrated schools were there is only one second year section the researcher let all those who were present during the administration of the Mathematics Achievement Test took the test and answer the questionnaire. This is in the case of Mualbual, Tenani and Cabungaan Integrated School, so those students who were present during that time took the test.

For the teacher-respondents total enumeration sampling was used. There are only seven integrated schools in Samar Division but in one of these schools, second year Mathematics is taught by two teachers. There were eight all in all teacher –respondents of the study. The parent-respondents of the study are the father or the mother of the student-respondents. They automatically become the parent-respondents of the study so there were a total of 281 parent-respondents. In cases wherein the student-respondents is an orphan or the parents are not in their homes or they are far because of their work/occupations the guardian was the one who answers the questionnaire for the parent-respondent.

Table 1

The Sampling Frame of the Study

Integrated Schools	Teacher-Respondents			Student-Respondents		
	N	Computed sample	Actual Sample	N	Computed sample	Actual Sample
Zumarraga IS	2	2	2	75	29	29
Cabungaan IS	1	1	1	41	16	26
Burgos IS	1	1	1	108	42	42
Tinane IS	1	1	1	44	17	35
Mualbual IS	1	1	1	59	23	32
Tominamos IS	1	1	1	211	82	82
Guinsorongan	1	1	1	91	35	35
Total	8	8	8	629	245	281

Data Gathering Procedure

The steps undertaken by the researcher in the data gathering were as follows: A letter was prepared address to the Schools Division Superintendent of Samar Division to allow him to conduct the study among second year students

and their mathematics teachers of integrated schools of Samar Division. After the letter was approved, he make another letter addressed to the principals of the different integrated schools to allow him to conduct the study and to get the needed documents such as Form 137-A. The principals of the different integrated schools were provided photocopy of the approved request of the study by the Schools Division Superintendent.

The researcher went next to the record section of Samar Division for the number of second year students enrolled during the school year 2008-2009 in the different integrated schools. Based on the "Principal Report of Enrollment", he found out that there were 629 second year students who were enrolled out of the seven integrated schools. This 629 constitute the student-respondents population. The researcher computed the desired sample size for the study and based on the computation using Sloven's formula it is equal to 245. He employed stratified sampling technique using the school as the strata to determine the total number of samples for each school. But in his study, there were 281 students, 281 parents and eight mathematics teachers who participated in the study, the reason because, in integrated schools like Mualbual, Tenani and Cabungaan in which there is only one second year section those students who were present during the time of the administration of the research instruments were made to take the test. The researcher personally administered and distributed the questionnaire-checklist and achievement test to the students and teachers in their respected schools during class hours, while the parent questionnaire were brought home

by the students to their mother and father to be answered. In order to ensure as high percentage of retrieval the researcher waited for the accomplished questionnaire. The questionnaire for parents which were not retrieved during the time of the administration, arrangement was made to retrieve the questionnaire at another time.

The researcher started collecting data last March 2009. It was March 04, 2009 in Mualbual and Zumarraga Integrated Schools riding a rented small motorboat for making the trip. March 05 when he went to Burgos Integrated School, Basey, Samar. In Tenane and Tominamos it was on March 06 and March 09, 2009. The gathering of data for Guinsorongan was last March 13, 2009 with the help of the adviser of the student. The data gathering for Cabungaan IS was March 16, 2009.

After the data collection, correcting of the mathematics achievement test follows and tallying and recording of responses of the respondents in a master tally sheet follows.

Statistical Treatment of Data

Data gathered was tabulated, organized, analyzed and interpreted with the use of the following descriptive and inferential statistical tools:

Frequency count. This descriptive statistical measure was used to present the profile of the respondents as to the number of occurrence.

Percentage. This was used in the analysis and interpretation of data on sex, age, civil status, and others.

Mean. This measure was employed to calculate the averages where the measure was applicable.

Standard deviation. This is the positive square root of the variance. It measures the spread of dispersion of each variate from the mean of the distribution.

Weighted mean. This was used to express the collective perceptions of the respondents such as, for the student-respondents, their study habits and attitude towards Mathematics, for the teacher-respondents their attitude towards mathematics teaching and for the parent-respondents their extent of supervision provided on their children's studies and their attitude towards mathematics.

In interpreting the weighted means, the following were used:

Weights	Interpretation
4.51-5.00	Strongly Agree (SA)/Very Highly Favorable Attitude (VHF)/Always Practiced (AP)/Very Much Extent VME)
3.51-4.50	Agree (A)/Highly Favorable Attitude (HF)/Often Practiced (OP)/Much Extent (ME)
2.51-3.50	Neutral (U)/Moderately Favorable Attitude (MF)/ Sometimes Practiced (SP)/Moderate Extent (MoE)
1.51-2.50	Disagree (D)/Less Favorable Attitude (LF)/Rarely Practiced (RP)/Less Extent (LE)
1.00-1.50	Strongly Disagree (SD)/Not Favorable Attitude NF)/Not Practiced (NP)/Very Little Extent (VLE) .

In terms of final grades in Grade Six Math, First Year Math, First Year English, the performance was interpreted as follows:

Grades	Interpretation
74 below	Poor Performance
75 – 79	Fair Performance
80 – 84	Satisfactory Performance
85 – 89	Very Satisfactory Performance
90 – 94	Superior Performance
95 above	Excellent

In order the researcher get an exact an interpretation for the final grades of the respondents. He divided the performance into equal partition. Since, the passing grade in the report card is 75 and the maximum grade is 99, so from grades 75–99, he divided into five equal divisions. The First division start from 75-79 describe as Fair Performance, form 80-84 describe as Satisfactory Performance, 85-89 Very Satisfactory, 90-94 Superior Performance and 95 above described as Excellent. And he also concludes that below grades 75 interpreted as Poor Performance because it is no longer passed.

Pearson Product Moment Correlation Coefficient (Pearson r). This statistical tool was used to determine the relationship between two variables, namely: 1) level of mathematics performance of second year high school students of integrated schools in the Division of Samar, and 2) the factors affecting the level of mathematics performance, namely: student-related factors, teacher-

related factors and home-related factors. The Pearson Product Moment Correlation Coefficient (Pearson r) was used (Walpole, 1982: 381).

$$r = \frac{N\Sigma xy - (\Sigma x)(\Sigma y)}{\sqrt{[N\Sigma x^2-(\Sigma x)^2][N\Sigma y^2-(\Sigma y)^2]}}$$

Where:

r	=	the computed statistical value
x	=	the independent variable (factors)
y	=	the predicted variable
N	=	number of cases
Σ	=	the summation notation

Below was used to interpret the reliability of the instrument through test – retest (Ebel, 1965:240).

Reliability Coefficient	Degree of Reliability
0.95 – 1.00	Very high, rarely found among teacher's made tests.
0.90 – 0.94	Highly equaled by few tests
0.80 – 0.89	Fairly high, adequate for individual measurement

0.70 – 0.79	Rather low, adequate for group measurement but not very satisfactory for individual measurement
below 0.70	Low, entirely inadequate for Individual Measurement although useful for group average and school survey.

Kuder-Richardson Formula 20. This tool was used to determine the reliability of the Mathematics Achievement Test instrument used. The formula of Calmorin (1994: 69) was used.

$$r_{11} = \left(\frac{N}{N-1}\right)\left(\frac{SD^2 - \Sigma p_1 q_1}{SD^2}\right)$$

Where:

r_{11} - reliability coefficient of the test

N - number of items in the test

p_1 - is the proportion if passing item i.

q_1 - 1 –p the proportion of the group failing an item

SD - standard proportion of the test scores.

$$SD^2 = \frac{\Sigma (X - X)^2}{N - 1}$$

Fisher's t-test. To test for the significance of the coefficient of correlation between a set of paired variables, the Fisher's t-test (Walpole,

1982:383) formula was used as follows: The formula is as follows (Simon and Freund, 1992:481)

$$t = r_{xy}\sqrt{\frac{n-2}{1-r_{xy}^2}}$$

where:

t - Fisher's t-value

n - number of paired observations

r - refers to the computed r_{xy} using Pearson-Product Moment Correlation Coefficient

Testing of hypotheses was done, using $\alpha = 0.05$ as the level of significance.

Chapter 4

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This chapter consists of the presentation of the data gathered through the questionnaires, mathematics achievement test, and school documents. The data include the profile of the student-respondents, teacher respondents, and home profile. It also includes results of the test of hypothesis.

Profile of the Student-Respondents

The profile of the student-respondents is presented in terms of age, sex, grade VI math grade, first year math grade, first year English grade, general weighted average grade in first year, study habits, and attitude towards mathematics.

Age. Table 2 presents the age of the student-respondents. As seen in the table, the youngest student-respondent is 13 years old and the oldest is 24 years old. The table shows that the majority of the respondents are 14 years old (120 or 42.70 percent), this must be because the student-respondents are second year high school students and the usual ages of second year high school students are 13, 14, and 15 years old. Some respondents are older for their year level such as having ages of 16, 17, 18 and even 24 years old and 32 respondents are young for their year level since they are only 13 years old.

Table 2

Distribution of the Student-Respondents as to Age

Age	Frequency	Percentage
13	32	11.40
14	120	42.70
15	76	27.00
16	26	9.30
17	12	4.30
18	7	2.50
19	5	1.80
20	2	0.70
24	1	0.40
Total	**281**	**100.00**
Mean	**14.74 yrs.**	-
SD	**1.43 yrs.**	-

The mean age is 14.74 years old and the SD is 1.43 years old which shows that there is a slight variation of the ages of the respondents from the mean age.

Sex. Table 3 presents the distribution of the student-respondents as to sex or gender. As seen in the table majority of them, 170 respondents or 60.50 percent are female while 111 respondents or 39.50 percent of them are male. The data shows that majority of the respondents are female. This implies that majority of the second year high school students in public integrated schools are female.

Table 3

Distribution of the Student-Respondents as to Sex

Sex	Frequency	Percentage
Male	111	39.50
Female	170	60.50
Total	**281**	**100.00**

Grades in elementary mathematics. Table 4 shows the math grade in grade VI of the student-respondents. As seen in the table, the lowest grade obtained by the student-respondents is 75 and 10 respondents or 3.60 percent of them have this as grade in Mathematics in grade VI, and the highest grade is 96 with one respondent has this as final grade in Math VI.

The distributions of their grades in Math VI are as follows: 163 or 57.90 percent of the student-respondents have grade VI Math grade in the range 80 - 84 or "satisfactory performance", 75 or 26.70 percent of the respondents have grade of 85-89 or "very satisfactory performance", eight or 2.90 percent have grade from 90-93 or superior performance, 34 or 12.20 percent of the respondents have final grade from 75-79 or fair performance, and one or 0.40 percent have obtained a grade of 96 or excellent performance in Math in grade VI.

The table shows that majority of the respondents have grades in Math VI described as satisfactory performance. The mean grade is 82.81 with an SD value

Table 4

Distribution of the Student-Respondents as to their Grade VI Math Grade

Final Grade Math VI	Frequency	Percentage
Fair Performance	**34**	**12.2**
75	10	3.6
76	2	0.7
77	3	1.1
78	10	3.6
79	9	3.2
Satisfactory Performance	**163**	**57.9**
80	52	18.5
81	17	6
82	40	14.2
83	24	8.5
84	30	10.7
Very Satisfactory Performance	**75**	**26.7**
85	27	9.6
86	16	5.7
87	11	3.9
88	10	3.6
89	11	3.9
Superior Performance	**8**	**2.9**
90	2	0.7
91	1	0.4
92	3	1.1
93	2	0.7
Excellent Performance	**1**	**0.4**
96	1	0.4
Total	**281**	**100**
Mean	**82.81**	-
SD	**3.63**	-

of 3.63 which indicated a slight variation in their final grade in Math in grade VI from the mean grade.

Grade in first year math. Table 5 shows the first year math final grade of the student-respondents. As seen in the table, the lowest grade obtained by one of the student-respondents is 71 interpreted as poor or not passing performance, and the highest grade is 92 with one respondent having this as first year math final grade.

The distributions of their first year math final grade are as follows: 138 or 49.00 percent of the student-respondents have first year math final grade in the range from 80-84 interpreted as "satisfactory performance", 76 or 27.10 percent of the respondents have obtained grades from 85 - 89 or "very satisfactory performance", 55 or 19.60 percent have grade from 75-79 or fair performance. None of the respondents obtained a grade in first year math described as excellent performance, but two respondents have obtained grades of 71 and 74 interpreted as poor and not passing performance.

The table shows that majority of the respondents have first year math final grade described as satisfactory performance. The mean grade is 82.44 with an SD value of 3.78 which indicated a slight variation in their first year math final grade from the mean grade.

Table 5

Distribution of the Student-Respondents as to their First Year Math Grade

First Year Math Grade	Frequency	Percentage
Poor (Not Passing) Performance	**2**	**0.8**
71	1	0.4
74	1	0.4
Fair Performance	**55**	**19.6**
75	10	3.6
76	7	2.5
77	10	3.6
78	8	2.8
79	20	7.1
Satisfactory Performance	**138**	**49**
80	33	11.7
81	25	8.9
82	31	11
83	22	7.8
84	27	9.6
Very Satisfactory Performance	**76**	**27.1**
85	29	10.3
86	19	6.8
87	10	3.6
88	10	3.6
89	8	2.8
Superior Performance	**10**	**3.6**
90	7	2.5
91	2	0.7
92	1	0.4
Total	**281**	**100**
Mean	**82.44**	-
SD	**3.78**	-

Grade in first year English. Table 6 shows the first year English final grade of the student-respondents. As seen in the table, the lowest grade obtained by one of the student-respondents is 70 interpreted as poor or not passing performance, and the highest grade is 95 with one respondent having this as final grade in first year English.

The distributions of their first year English final grade are as follows: 145 or 49.00 percent of the student-respondents have first year English final grade in the range 80 - 84 or "satisfactory performance", 81 or 27.10 percent of the respondents have grade of 85-89 or "very satisfactory performance", 41 or 19.60 percent of the respondents have final grade from 75-79 or fair performance, 12 or 7.20 percent have grade from 90-94 or superior performance, and one each obtained a grade in first year English described as excellent performance (95) and poor or not passing performance (70).

The table shows that majority of the respondents have first year English final grade described as satisfactory performance. The mean grade is 82.79 with an SD value of 3.76 which indicated a slight variation in their first year English final grade from the mean grade.

Table 6

Distribution of the Student-Respondents as to their Grade in English in their First Year

First Year English Grade	Frequency	Percentage
Poor (Not Passing) Performance	**1**	**0.4**
70	1	0.4
Fair Performance	**41**	**19.6**
75	6	3.6
76	5	2.5
77	6	3.6
78	11	2.8
79	13	7.1
Satisfactory Performance	**145**	**49**
80	37	11.7
81	32	8.9
82	27	11
83	32	7.8
84	17	9.6
Very Satisfactory Performance	**81**	**27.1**
85	40	10.3
86	18	6.8
87	7	3.6
88	6	3.6
89	10	2.8
Superior Performance	**12**	**7.2**
90	6	2.5
91	1	0.7
92	2	0.4
94	3	3.6
Excellent Performance	**1**	**0.4**
95	1	0.4
Total	**281**	**100**
Mean	**82.79**	**-**
SD	**3.76**	**-**

General weighted average (GWA) grade in first year. Table 7 shows the general weighted average (GWA) grade of the student-respondents in first year. As seen in the table, the lowest GWA obtained by the student-respondents is 75 and three respondents or 1.20 percent of them have this as their GWA grade in first year, and the highest GWA grade is 91 with two respondents having this as their GWA grade in first year.

The distributions of their GWA grade in first year are as follows: 166 or 60.00 percent of the student-respondents have GWA grade in the range 80 - 84 or "satisfactory performance", 76 or 27.50 percent of the respondents have grade of 85-89 or "very satisfactory performance", 28 or 10.40 percent have grade from 75-79 or "fair performance", and nine or 3.30 percent of the respondents have GWA grade from 90-91 described as superior performance in terms of GWA grade.

The table shows that majority of the respondents have GWA grade described as "satisfactory" performance". The mean of the GWA grade is 83.18 with an SD value of 3.26 which indicated a slight variation in their GWA grade from the mean obtained for the GWA grade.

Study habits. The student-respondents study habit is presented in Table 8. As seen in the table, the ratings given to the 20-study habits statements are as follows: 15 statements are rated as "often practiced", five statements were rated "sometimes practiced" by the student-respondents.

Table 7

Distribution of the Student-Respondents as to their General Weighted Average (GWA) Grade in First Year

First Year General Weighted Average (GWA) Grade	Frequency	Percentage
Fair Performance	**28**	**10.4**
75	3	1.2
76	5	1.8
77	5	1.9
78	5	1.8
79	10	3.7
Satisfactory Performance	**166**	**60**
80	31	11.3
81	25	8.8
82	35	12.6
83	46	16.7
84	29	10.6
Very Satisfactory Performance	**76**	**27.5**
85	16	5.8
86	26	9
87	20	7.2
88	13	4.8
89	1	0.7
Superior Performance	**9**	**3.3**
90	7	2.6
91	2	0.7
Total	**281**	**100**
Mean	**83.18**	-
SD	**3.26**	-

The highest rating of 4.00 interpreted as "often practiced" indicating a good study habits was given to two statement indicators; 1) At home, I study in a well lighted and well ventilated place/room and I do it before I sleep, and 2) I

Table 8

Student-Respondents' Study Habits

Study Habits Statements	Weighted Mean	Int.
1. I study in a silent room with sweet music in the background.	3.57	OP
2. I study and watch TV at the same time.	2.93	SP
3. I read my books, notes and study my lessons during early morning.	3.68	OP
4. At home, I study in a well lighted and well ventilated place/room and I do it before I sleep.	4.00	OP
5. If I cannot solve my assignment at home I come to school early so that I can ask my classmates and teachers about it.	3.93	OP
6. I go and visit the school library to read and study during my vacant time in school.	3.89	OP
7. I scan and read my notes and books in the classroom if the teacher is not starting the class discussion yet.	3.91	OP
8. I always double check my solutions before I submit to my teacher my test, quiz, exercises, and assignments especially if there is still time.	4.00	OP
9. I ask the correct answer for numbers which were marked wrong by my teacher when my paper is returned after it is corrected.	3.78	OP
10. I try to work on my own and asked the help of my classmates and teachers only if I have exhausted all my efforts and still I cannot figure out what is wrong with my solutions/answer in a math problem.	3.95	OP
11. I utilize my vacant hours between classes to go to the library to read books and journals in mathematics.	3.71	OP
12. I prefer to study alone rather than with others.	3.56	OP
13. During lectures and class discussion I copy and take notes the theorems, principles, postulates, and others written by the teacher.	3.94	OP
14. I read my math textbooks and other references at home before I go to sleep everyday for one hour.	3.73	OP
15. I work with my members in group projects assigned by our teacher such as using the INTERNET, computers among others.	3.22	SP
16. I memorized math theories, postulates, theorems, principles as often as I have time.	3.47	SP
17. I try other methods in solving math problems aside from the one taught by our teacher.	3.63	OP
18. I study my math lessons three times a week even if there is no scheduled quiz for that day.	3.45	SP
19. I work on my math assignment the first thing when I arrived home.	3.63	OP
20. I study my math lessons with classmate(s) everyday for at most one hour.	3.40	SP
Grand Total	73.38	
Grand Mean	**3.67**	**OP**

Legend: 4.51-5.00 Always Practiced (AP)
3.51-4.50 Often Practiced (OP)
2.51-3.50 Sometimes Practiced (SP)
1.51-2.50 Rarely Practiced (RP)
1.00-1.50 Not Practiced (NP)

always double check my solutions before I submit to my teacher my test, quiz, exercises, and assignments especially if there is still time.

The first five study habits which were rated as "often practiced" by the respondents which indicated a good study habits are as follows: 1) At home, I study in a well lighted and well ventilated place/room and I do it before I sleep-4.00; 2) I always double check my solutions before I submit to my teacher my test, quiz, exercises, and assignments especially if there is still time-4.00; 3) I try to work on my own and asked the help of my classmates and teachers only if I have exhausted all my efforts and still I cannot figure out what is wrong with my solutions/answer in a math problem-3.95; 4) During lectures and class discussion I copy and take notes the theorems, principles, postulates, and others written by the teacher-3.94, and 5) If I cannot solve my assignment at home I came to school early so that I can ask my classmates and teacher about it-3.93.

The five study habits indicators which were rated as "sometimes practiced" by the student-respondents showing a need to improve or enhanced their study habits since they sometimes practiced them only are: 1) I memorized math theories, postulates, theorems, principles as often as I have time-3.47; 2) I study my math lessons three times a week even if there is no scheduled quiz for that day-3.45; 3) I study my math lessons with classmate(s) everyday for at most one hour-3.40; 4) I work with my members in group projects assigned by our teacher such as using the INTERNET, computers among others-3.22, and 5) I study and watch TV at the same time. Except, for the study habit statement, I

study and watch TV at the same time, which should be sometimes practiced only the other four study habits indicators should be always practiced or often practiced by the students to have better school performance.

On the whole, the student-respondents exhibited good study habits as indicated by the grand mean obtained of 3.67 interpreted as "often practiced" or the respondents practiced all the indicators of study habits as often as possible.

Attitude towards mathematics. The student-respondents attitude towards Mathematics is presented in Table 9. As seen in the table, the ratings given to the 20-attitude statements were as follows: 16 statements were rated as "agree", four statements were rated "neutral" by the student-respondents.

The highest rating of 4.31 interpreted as "agree" indicating a positive or highly favorable attitude was given to the attitude statement indicator, "I like that my teacher gives several examples before giving individual exercises, seatwork and board work", and the lowest rating of 3.23 was given to the attitude statement, "When I have doubt about the correct solutions to the problem given, I refer to a book to follow".

The first five statements based on weighted mean ratings, which were rated as agree by the respondents which indicated a highly favorable attitude or positive attitude towards mathematics are as follows: 1) I like that my teacher gives several examples before giving individual exercises, seatwork and board work-4.31; 2) I appreciate students/classmates who try their best to solve problems in mathematics - 4.19; 3) I believe that math is needed in my daily life-

Table 9

Student-Respondents' Attitude towards Mathematics

Attitude Statements	Weighted Mean	Int.
1. I find mathematics an interesting subject	4.02	A
2. I wish I could take more mathematics subjects other than those offered in my course.	3.54	A
3. Mathematics makes me feel relaxed, happy and comfortable.	3.52	A
4. I feel alive and alert in my mathematics class.	3.64	A
5. I find the textbook in math very interesting.	3.74	A
6. I believe that math is needed in my daily life.	4.10	A
7. I love Mathematics it develops in me a feeling of superiority and importance.	3.91	A
8. I appreciate students/classmates who try their best to solve problems in mathematics.	4.19	A
9. I like to recite and participate in the seatwork and board work in Mathematics.	4.00	A
10. I like that my teacher gives several examples before giving individual exercises, seatwork and board work.	4.31	A
11. I always like to attend my math class than any other classes.	3.51	A
12. I always like to do my assignments, home work, problem sets, exercises, and projects in math on my own rather than ask someone to help me.	3.85	A
13. I make it my concern to go to the library to look for references in mathematics.	3.65	A
14. I study in advance in my math subject than my other subjects.	3.27	U
15. I always asked my teachers for clarifications of a topic/lesson in math that I do not understand.	3.60	A
16. I ask my teacher in class or after our class to explain to me topics in math that I am not clarified about	3.40	U
17. I ask others for help in my math lessons and assignment if my teacher and classmates are not available.	3.57	A
18. I give special attention to the accuracy of the solutions I do whenever the teacher gives exercises in class.	3.80	A
19. I don't hesitate to ask my teacher questions about our math lessons that would help me understand mathematics better.	3.29	U
20. When I have doubt about the correct solutions to the problem given, I refer to a book to follow.	3.23	U
Grand Total	**74.14**	-
Grand Mean	**3.71**	**A**

Legend: 4.51-5.00 Strongly Agree (SA)/Very Highly Favorable Attitude (VHF)
3.51-4.50 Agree (A)/Highly Favorable Attitude (HF)
2.51-3.50 Undecided (U)/Moderately Favorable Attitude (MF)
1.51-2.50 Disagree (D)/Less Favorable Attitude (LF)
1.00-1.50 Strongly Disagree (SD)/Not Favorable Attitude (NF)

4.10; 4) I find mathematics an interesting subject-4.02, and 5) I like to recite and participate in the seatwork and board work in Mathematics-4.00.

The four attitude statements which were rated as "neutral" by the student-respondents showing a moderately favorable attitude are: 1) I ask my teacher in class or after our class to explain to me topics in math that I am not clarified about-3.40; 2) I don't hesitate to ask my teacher questions about our math lessons that would help me understand mathematics better-3.29; 3) I study in advance in my math subject than my other subjects-3.27, and 4) When I have doubt about the correct solutions to the problem given, I refer to a book to follow-3.23.

On the whole, the student-respondents exhibited a highly favorable attitude towards Mathematics since the grand mean obtained is 3.71 interpreted as "highly favorable attitude" towards Mathematics.

Profile of the Teacher-Respondents

The profile of the Mathematics teacher-respondents is presented in the next two tables. Table 10 presents the profile of the teacher-respondents teaching second year mathematics in integrated schools in terms of their age, sex, average monthly family income, highest educational attainment, teaching experience, teaching load, and number of trainings and seminars attended.

Age. As to age of the teacher-respondents, as seen in the table, the oldest teacher–respondent is 41 years old while the youngest is 28 years old. The

Table 10

Profile of the Second Year High School Mathematics Teacher-Respondents as to Age, Sex, Average Family Monthly Income, Educational Attainment Teaching Experience, Teaching Load and Number of Relevant Seminars/Trainings Attended

Resp.	Age	Sex	Average Monthly Income (in pesos)	Educational Attainment	Teaching Experience	Teaching Load	No. of Relevant Seminars/ Trainings Attended
A	30	F	10,000.00	College Graduate	9	7	8
B	36	F	19,000.00	MA CAR	4	6	10
C	41	M	10,000.00	College Graduate	16	6	20
D	36	M	10,000.00	College Graduate	10	7	15
E	38	M	10,000.00	Law Graduate	11	6	14
F	30	M	15000.00	MAT CAR	6	5	10
G	28	M	10500.00	College Graduate	7	5	8
H	33	M	10,000.00	College Graduate	5	5	10
Max	**41**	-	**19,000.00**	**MA CAR**	**16**	**7**	**20**
Min	**28**	-	**10,000 .00**	**College Graduate**	**4**	**5**	**8**
Total	**20s= 1 30s= 6 40s= 1**	**F=2 M=6**	**10,000=5 10,500=1 15,000=1 19,000=1**	**College Graduate=5 MA/MAT CAR =2 Law Graduate (LLB) =1**	**4-1 9-1 5-1 10-1 6-1 11-1 7-1 16-1**	**5 - 3 6 - 3 7 - 2**	**8- 2 10 - 3 14 -1 15 -1 20 - 1**
Mean	**34.00**	-	**P11,812.50**	-	**8.5**	**6**	**12**
SD	**4.50**	-	**P3379.96**	-	**3.89**	**1**	**4**

majority of the teacher-respondents teaching Mathematics II are in their 30s. Moreover, the distributions of their ages are as follows: one of the teachers is in the line of 20s, one in the line of 40s, and six in their 30s. The mean age is pegged at 34.00 years old which shows that the teachers are still young. The SD

obtained is 4.50 showing that the ages of the teachers are slightly dispersed from the mean age.

Sex. The same table presents the sex of the teacher-respondents. As seen in the table, of the eight Mathematics teacher-respondents, six of them are males while two of them are females. This shows that the Mathematics teachers in Integrated Schools are dominated by males.

Average monthly family income. As to the average monthly income of the teacher-respondents, the same table reveals that the lowest income of the teacher-respondents is PhP 10,000.00 and the highest income is PhP 19,000.00. The mean income is pegged at PhP 11,812.50 which shows that majority of the teacher-respondents are living below the poverty threshold set by NEDA in 2007 which was PhP 13,515.00 for a family a six members in Region VIII. The data implies that the mathematics teachers in Integrated Schools are living below poverty which indicates low income.

Educational attainment. The table also shows the educational attainment of the teacher-respondents. As seen in the table, the majority of the teacher-respondents are college graduates (BSED), two of them had earned units in MA/MAT/MAEd or other graduate degree programs, and one is a law graduate (LLB). The table implies that the teachers in Integrated Schools are not motivated to take advanced studies, they are not new to teaching, but not one of them finished a master's degree.

Teaching experience. Relative to teaching experience of the teacher-respondents, the table reveals that the youngest in teaching experience has taught for four years and the oldest have 16 years in teaching. Moreover, the distribution of the teacher respondents in teaching experience are as follows: five of them have a teaching experience of less than 10 years and three of them have 10 years and more teaching experience. This implies that these teachers are experienced teachers in teaching second year Mathematics having had teaching experience of four years and more.

Teaching load. Relative to teaching load of the teacher-respondents, the table reveals that three teachers each had five and six teaching loads and two of them have seven teaching loads. The mean of the group in terms of number of teaching load is six, which shows that majority of them have regular teaching load. This data also implies that the teacher-respondents are teaching other subjects aside from Mathematics II.

Number of relevant seminars/trainings attended. The table also presents the number relevant seminars and trainings attended by the respondents. As reflected in the table, the smallest number of seminars/trainings relevant to Mathematics teaching attended by the respondents is eight and the highest number is 20. The majority of the teacher respondents have 10 seminars/trainings each. Moreover, the distributions of the number of seminars are as follows: three respondents have 10 seminars each, two respondents have 8 seminars each, and one respondent have 14, 15, and 20

seminars each. The mean for the number of seminars/training attended is 12 seminars each and the SD is four which showed slight variation of the number of seminars from the mean number of seminars. The data implies that the Mathematics teachers in Integrated Schools are made to attend seminars and trainings in Mathematics teaching in high school.

Table 11 presents the attitude towards Mathematics of the teacher-respondents.

Attitude towards mathematics teaching. As to the teacher-respondent's attitude towards mathematics teaching, as seen in the table, the teacher-respondents rated nine out of the 20 statement-indicators for attitude towards mathematics with "strongly agree" and 11 of them with "agree", which indicated a "very highly favorable" attitude and "highly favorable" attitude towards mathematics.

Of the nine attitude statements rated as "strongly agree" their ratings are as follows: one statement is rated as 5.00, six of them were rated 4.88, and two were rated 4.75. The nine attitude statements which were rated as strongly agree are: 1) I like teaching mathematics to my students because I believe that the subject is useful to the development of every individual-5.00; 2) I appreciate students who try their best to solve problems in mathematics on their own or in groups-4.88; 3) I gives several examples before giving my students individual exercises, seatwork and board work-4.88; 4) I prepare in advance my math lessons for the class - 4.88; 5) I give special attention to the accuracy of facts,

Table 11

Teacher-Respondents Attitude towards Mathematics Teaching

Attitude Indicators	W Mean	Int.
1. I appreciate students who try their best to solve problems in mathematics on their own or in groups.	4.88	SA
2. I gives several examples before giving my students individual exercises, seatwork and board work.	4.88	SA
3. I make it my concern to buy my own mathematics book and go to the library to look for references in mathematics or use the INTERNET.	4.25	A
4. I prepare in advance of my math lessons for the class.	4.88	SA
5. I ask my students in class to explain to me and to the class their conjectures, solutions to problems during our math class.	4.50	A
6. I give special attention to the accuracy of facts, formula, principles, theories, solutions in Math whenever I give exercises in class.	4.88	SA
7. I let my pupils realize that it is important to enjoy mathematics.	4.88	SA
8. I find people who can do math clever.	4.25	A
9. I believe I still would want to be a mathematics teacher given the chance to live life all over again.	4.50	A
10. When I see mathematically gifted pupils I encourage them to pursue a career in math.	4.38	A
11. I allow my pupils to talk to me about what they think and feel towards mathematics and their problems toward learning math.	4.75	SA
12. I like teaching mathematics to my pupils because I believe that the subject is useful to the development of every individual	5.00	SA
13. Mathematics teaching is interesting and rewarding to me. It enhances my knowledge of the subject and encourage me to have faith in my pupils' ability to learn the subject.	4.88	SA
14. I don't hesitate to ask help from my co-teachers about math topics/lessons that I would teach it to my class, if I am not very knowledgeable and confident about it	4.75	SA
15. Math is fun much is learned from a wrong answer as from a right one.	4.25	A
16. I like math since I enjoy using guesswork in solving problems and there is no half right answers.	4.13	A
17. I like Math because it is mostly expressed in symbols and not in words.	4.25	A
18. I like math for the symbols and numbers used have specific meaning.	3.88	A
19. I find beauty in the algorithm for getting things done in Math.	4.00	A
20. I like to teach math because I am regarded very high by my students.	3.88	A
Grand Total	**90.00**	-
Grand Mean	**4.50**	**A**

Legend:
- 4.51 - 5.00 - Strongly Agree (SA)/Very Highly Favorable Attitude
- 3.51 - 4.50 - Agree (A)/Highly Favorable Attitude
- 2.51 - 3.50 - Neutral (N)/Moderately Favorable Attitude
- 1.51 - 2.50 - Disagree (D)/Less Favorable Attitude
- 1.00 - 1.50 - Strongly Disagree (SD)/Not Favorable Attitude

formula, principles, theories, solutions in Math whenever I give exercises in class-4.88; 6) I let my students realize that it is important to enjoy mathematics-4.88; 7) Mathematics teaching is interesting and rewarding to me. It enhances my knowledge of the subject and it encouraged me to have faith in my students' ability to learn the subject-4.88; 8) I allow my students to talk to me about what they think and feel towards mathematics and their problems toward learning math-4.75, and 9) I don't hesitate to ask help from my co-teachers about math topics/lessons that I would teach to my class that I am not knowledgeable or confident about it -4.75 .

The distribution of the ratings of the eleven attitude statements rated "agree" are as follows: two statements were rated 4.50, one statement 4.38, four statements were rated 4.25, one each were rated 4.13 and 4.00 and two rated 3.88.

The attitude statements which were rated as "agree" showing a highly favorable attitude, the first seven of them are: 1) I ask my students in class to explain to me and to the class their conjectures, solutions to problems during our math class-4.50; 2) I believe I still would want to be a mathematics teacher given the chance to live life all over again-4.50; 3) When I see mathematically gifted students I encourage them to pursue a career in math-4.38; 4) I make it my concern to buy my own mathematics book and go to the library to look for references in mathematics or use the INTERNET-4.25; 5) I find people who can do math clever-4.25; 6) Math is fun much is learned from a wrong answer as

from a right one-4.25, and 7) I like Math because it is mostly expressed in symbols and not in words.

The grand mean for the teachers' attitude towards Mathematics obtained is 4.50 interpreted as "agree" or highly favorable attitude towards Mathematics. This meant that the teacher-respondents of the study have highly favorable attitude towards the subject they are teaching. This would imply that they are competent in teaching the subject.

Home Profile of the Student-Respondents

The home profile of the student-respondents is presented with respect to parents' age, parents' educational attainment, parents' religion, average family monthly income, household size, extent of supervision provided by parents to children's studies, and attitude of parent towards Mathematics. This is presented in Table 12 to Table 18.

Parents' age. Table 12 presents the distribution of the ages of the parents of the respondents. As to age, with respect to the fathers of the respondents, the youngest father is in the age bracket 30-34 years old with 10 fathers or 3.56 percent of them having this as their age. The oldest father has ages in the age bracket 65-69 years old with five fathers or 1.78 percent of them having this as their ages.

Moreover, the distribution of their ages are as follows: 79 or 28.11 percent of them are having ages in the range from 40 -44 years old, 61 or 21.71 percent

have ages in the range from 45-49 years old, 61or 21.71 percent of them are having ages from 45-49 years old. The mean age is 45.63 years old and the SD is 7.59 years old showing a slight variation of their ages from the mean age.

Table 12

Distribution of the Parents of the Respondents as to their Ages

Age	Parents			
	Father		Mother	
	Freq.	Percent	Freq.	Percent
30-34	10	3.56	41	14.59
35-39	51	18.15	75	26.69
40-44	79	28.11	65	23.13
45-49	61	21.71	56	19.93
50-54	38	13.52	31	11.03
55-59	27	9.61	6	2.14
60-64	10	3.56	5	1.78
65-69	5	1.78	2	0.71
Total	**281**	**100.00**	**281**	**100.00**
Mean	**45.63**	-	**42.22**	-
SD	**7.59**	-	**7.20**	-

As to age of the respondents' mothers, the youngest mother is in the age bracket 30-34 years old with 41 mothers or 14.59 percent of them having this as their age. The oldest mothers have ages in the age bracket 65-69 years old with two mothers or 0.71 percent of them having this as their ages. Moreover, the distribution of their ages are as follows: 75 or 26.69 percent of them are having ages in the range from 35-39 years old, 65 or 23.13 percent have ages in the range from 40-44 years old, 56 or 19.93 percent of them are having ages from 45-49

years old. The mean age is 42.22 years old and the SD is 7.20 years old showing a slight variation of their ages from the mean age.

Parents' educational attainment. Table 13 presents the educational attainment of the parents of the student-respondents. As seen in the table, for the father of the respondents majority of them reached elementary level of education only (97 or 34.52 percent), this is followed by 58 respondents or 20.64 percent whose fathers reached high school level and 55 respondents' fathers who were elementary graduates, and 43 or 15.30 percent who were high school graduates.

Table 13

Distribution of the Student-Respondents as to Educational Attainment of Parents

Educational Attainment	Father		Mother	
	Frequency	Percentage	Frequency	Percentage
Elem. Level	97	34.52	76	27.00
Elem. Grad.	55	19.57	49	17.40
High School Level	58	20.64	53	18.90
High School Grad.	43	15.30	67	23.80
College Level	18	6.41	23	8.20
College Grad.	10	3.56	13	4.60
Total	**281**	**100.00**	**199**	**100.00**

For the educational attainment of the mothers of the respondents, majority of them reached up to elementary level of education, 76 or 27.00 percent, this is followed by 67 respondents' mothers or 23.8 percent whose mothers were high school graduates and 53 respondents' mothers or 18.90 percent who reached high

school level. There were 13 mothers who were college graduates and 23 were college level.

The table reveals that the majority of the parents (both father and mother) of the respondents reached up to elementary level in their educational attainment.

Parents' religion. Table 14 presents the religion of the parents of the student-respondents. As seen in the table, for the father of the respondents majority of them were Roman Catholic faith (280 or 99.60 percent), only one father is a Bible

Table 14

Distribution of the Student-Respondents as to Religion of the Parents

Religion	Father		Mother	
	Frequency	Percentage	Frequency	Percentage
Roman Catholic	280	99.60	280	99.60
Bible Baptist	1	0.40	1	0.40
Total	**281**	**100.00**	**281**	**100.00**

Baptist. For the religion of the mothers of the respondents, majority of them were of the Roman Catholic faith (280 or 99.60 percent), one of the mothers of the respondents is a Bible Baptist.

The table reveals that the majority of the parents of the respondents were Roman Catholic. This must be because the dominant religion in Samar is Roman Catholic.

Average family monthly income. As to the average family monthly income, Table 15 reveals that the lowest income is PhP 5,000.00 and less with 196 or 69.75 percent respondents having this as their average family monthly income and the highest income is in the range from PhP 45,001.00-PhP 50,000 and only one respondent has this for average family monthly income. The table shows that 66 or 23.49 percent of the respondents have average family monthly income ranging from PhP 5,001- PhP 10,000. The mean income is pegged at PhP 5, 161.39 which showed that majority of the student-respondents were living below poverty threshold set by NEDA 8 in Eastern Visayas for 2003 in the amount of PhP 10,804.00 (2003:www.neda8.ph). The data implies that majority of the

Table 15

Average Monthly Income of the Student-Respondents' Family

Average Monthly Family Income (in pesos)	Frequency	Percentage
Php 5000 and less	196	69.75
Php 5001 – Php 10000	66	23.49
Php 10001 – Php 15000	8	1.2
Php 15001 – Php 20000	5	1.8
Php 20001 – Php 25000	2	0.7
Php 25001 – Php 30000	1	0.4
Php 30001 – Php 35000	2	0.80
Php 35001 – Php 40000	0	0.00
Php 40001 – Php 45000	0	0.00
Php 45001 – Php 50000	1	0.4
Total	**281**	**100.00**
Mean	**PhP 5,161.39**	-
SD	**PhP 5,076.56**	-

families of the respondents are low income. The SD obtained for income is Php 5,076.56 which indicated that there were variations in the income of the respondents from the mean income.

House hold size. Table 16 presents the household size of the respondents. As seen in the table, the smallest household contains three members and the biggest contains 15 members. The table shows that there were a 48 students respondents or 17.10 percent are having a big household, such as five and seven; 41 or 14.60 percent have a household size of nine; 40 or 14.20 percent have a household size of 6. The main is 7 with SD of 2, which shows that majority of the respondents belong to the big household size.

Table 16

Distribution of the Student-Respondents as to their Household Size

Household size	Frequency	Percentage
3	14	4.90
4	31	11.00
5	48	17.10
6	40	14.20
7	48	17.10
9	41	14.60
10	28	10.00
11	14	5.00
12	11	3.90
13	4	1.40
14	1	0.40
15	1	0.40
Total	**281**	**100.00**
Mean	**7**	-
SD	**2**	-

members. The data implies that the majority of the households of the student-respondents are big households.

Extent of supervision provided by parents in their children studies. Table 17 shows the respondents' parents extent of supervision provided on their children's studies. As seen in the table, of the 10 statements showing the parents' extent of supervision on their children studies, eight of the statements were rated "agree" and two of them were rated "neutral". The two statements rated neutral are: 1) I hire private tutor(s) to keep my child school performance at par with classmates-2.71, and 2) I regularly visit the school to inquire from the teachers the performance of my child in every subject and his/her over-all performance-3.49.

The statements which were rated as "agree" showing that the parents exercise their supervision on their children studies to a much extent, the first five are: 1) I show interest in the grades that my child get-4.12, 2) I provide for the financial needs of my child such as expenses for projects, school field trips, and the like-4.07, 3) I always attend PTA meetings called for by the teachers as much as possible-4.04, 4) I give my child reward for good school performance such as increase of school allowance, new school bags and other personal things-3.85, and 5) I show appreciation of my child achievement in school by attending programs and convocations in which my child will be awarded a certificate, medal, cash prizes and the like-3.80.

Table 17

Extent of Supervision Provided by Parents on Children's Studies

Statement Indicators	Mean	Inierpret
1. I always attend PTA meetings called for by the teachers as much as possible.	4.04	Agree
2. I regularly visit the school to inquire from the teachers the performance of my child in every subject and his/her over-all performance.	3.49	Agree
3. I help my child in his/her /home work, assignment and projects.	3.58	Agree
4. I make a follow-up in school of matters that affect my child.	3.70	Agree
5. I show interest in the grades that my child get.	4.12	Agree
6. I hire private tutor(s) to keep my child school performance at par with classmates.	2.71	Neutral
7. I show appreciation of my child achievement in school by attending programs and convocations in which my child will be awarded a certificate, medal, cash prizes and the like.	3.80	Agree
8. I served as teacher of my child at home in his/her assignment/home work/ and school projects.	3.71	Agree
9. I provide for the financial needs of my child such as expenses for projects, school field trips, and the like.	4.07	Agree
10. I give my child reward for good school performance such as increase of school allowance, new school bags and other personal things,	3.85	Agree
Grand Total	**37.09**	-
Grand Mean	**3.71**	**Agree**

Legend:

4.51 - 5.00	-Strongly Agree (SA)/To a Very Much Extent
3.51 - 4.50	-Agree (A)/To a Much Extent
2.51 - 3.50	-Neutral (N)/To a Moderately Extent
1.51 - 2.50	-Disagree (D)/To a Less Extent
1.00 - 1.50	-Strongly Disagree (SD)/To a Very Less Extent

The mean obtained for the ratings of the 10 statement-indicators of extent of supervision provided on their children's studies by parents is 3.71 interpreted as "agree" which means that parents are doing their share in the education of their children, since generally they "agree" to the statement indicators.

Attitude towards mathematics. Table 18 shows the parents' attitude towards mathematics. As seen in the table, of the 10 statements showing the parents' attitude towards Mathematics, seven of the statements were rated "agree" and three of them were rated "neutral".

The parents' of the student-respondents were "neutral" on the following attitude indicators which indicated that they have moderately favorable attitude towards mathematics: 1) I help my child with his/her mathematics assignment at home-3.44; 2) I would ask my child math teacher in school to explain to me topics in math that I am not clarified about in order to help my child in math-3.18, and 3) I would hire a private tutor for my child in mathematics to improve my child school performance-2.83.

The first three attitude statements in which the parents rated them "agree" are: 1) I like that my child will recite and participate in his/her math class-4.23; 2) I like that math teachers give several examples before giving my child assignment and homework-4.18, and 3) I don't want that my child will make absences in his/her mathematics classes-4.07.

Table 18

Parents' Attitude towards Mathematics

Mathematics Attitude	Mean	Interpret
1. I help my child with his/her mathematics assignment at home.	3.44	Neutral
2. I like that math teachers give several examples before giving my child assignment and homework.	4.18	Agree
3. I like that my child will recite and participate in his/her math class.	4.23	Agree
4. I don't want that my child will make absences in his/her mathematics classes.	4.07	Agree
5. I like that my child will have references in math other than the textbook.	3.60	Agree
6. I would hire a private tutor for my child in mathematics to improve my child school performance.	2.83	Neutral
7. I would ask my child math teacher in school to explain to me topics in math that I am not clarified about in order to help my child in math.	3.18	Neutral
8. I will study my child math lessons in advanced to help him/her in his assignment, home work and project.	3.56	Agree
9. I would like that my child will do her home work and assignment in math with my help.	3.65	Agree
10. If my child will excel in mathematics I will give her reward for good school performance.	3.78	Agree
Grand Total	**36.51**	
Grand Mean	**3.65**	**Agree**

Legend:

4.51 - 5.00	-Strongly Agree (SA)/Very Highly Favorable Attitude
3.51 - 4.50	-Agree (A)/Highly Favorable Attitude
2.51 - 3.50	-Neutral (N)/Moderately Favorable Attitude
1.51 - 2.50	-Disagree (D)/Less Favorable Attitude
1.00 - 1.50	-Strongly Disagree (SD)/Not Favorable Attitude

Level of Mathematics Performance of the Student-Respondents based on the Mathematics Achievement Test

Table 19 shows the level of mathematics performance of the student-respondents based on the Mathematics Achievement Test of 50 items prepared by the researcher. As seen in the table, the lowest score is a score ranging from 11-20 obtained by 67 student-respondents interpreted as poor performance, and the highest score is in the range from 51-60 and nine respondents or 3.20 percent of them have obtained this score in the Mathematics Achievement Test interpreted as superior level of performance in the Mathematics Achievement Test.

The distributions of their scores in the Mathematics Achievement Test are as follows: 107 or 38.08 percent of the student-respondents have obtained scores in the range from 21-30 interpreted as "fair performance", 67 or 23.84 percent of the respondents have obtained scores from 11-20 interpreted as "poor level achievement in Mathematics", 50 or 17.79 percent have obtained scores from 41-50 interpreted as very satisfactory performance in the Mathematics Achievement Test, 48 or 17.08 percent of the respondents have final grade from 31-40 or satisfactory performance level, and nine or 3.20 percent have obtained a score from 51-60 interpreted as superior performance in the Mathematics Achievement Test.

The table shows that majority of the respondents have obtained scores in the Mathematics Achievement Test described as fair and poor performance. The

mean score is 25.62 interpreted as fair performance with an SD value of 6.85 which indicated a slight variation in their scores from the mean score in the Mathematics Achievement Test.

Table 19

Distribution of the Respondents as to their Scores in the Mathematics Achievement Test

Scores	Frequency	Percentage
Poor Performance (11-18)	67	23.84
Good Performance (19-26)	107	38.08
Satisfactory Performance (27-34)	48	17.08
Very Satisfactory Performance (35-42)	50	17.79
Superior Performance (43-50)	9	3.20
Total	**281**	**100.00**
Mean	**25.62**	-
SD	**6.85**	-

Relationship between Student-Respondents Level of Mathematics Performance and Variates

The relationship between the student-respondents level of mathematics performance and the following: 1) student-related factors: 2) teacher-related factors, and 3) home related factors is presented in the next three tables.

Student-related factors. Table 20 presents the relationship between level of mathematics performance of the student-respondents and the student-related variates, namely: age, sex, grade VI math grade, first year math grade, first year English grade, general weighted average grade in first year, study habits, and attitude towards mathematics.

Age. For the correlation of age of the student-respondents and their level of Mathematics performance, the computed r is -0.01. The negative r-value denotes an inverse relationship between the variables. The computed t-value is -0.15, which absolute value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. The hypothesis which stated that "there is no significant relationship between age of the student-respondents and their level of performance in mathematics was accepted". This means that age was not a correlate of performance.

Sex. For the correlation of sex and level of performance in Mathematics, the computed r was -0.03. The negative r-value denotes an inverse relationship between the variables. The computed t-value was -0.42, which absolute value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance of the hypothesis, which states, "There is no significant relationship between sex of the student-respondents and their level of performance in Mathematics". This means that male and female student-respondents have the same level of performance in Mathematics. On this basis, sex was not a correlate of performance in Mathematics.

Table 20

Results of Correlation Analysis between Level of Mathematics Performance of the Student-Respondents and Student-Related Variates

Student-Respondents Level of Mathematics Performance vs Student-related Variates	r_{xy}	Fisher's t-value		Evaluation/ Decision
		Computed	Critical Df=279, $\alpha = 0.05$ (two tailed)	
Age	-0.01	-0.15	1.96	NS/ Accept Ho.
Sex	-0.03	-0.42	1.96	NS/ Accept Ho.
Grade VI math grade	0.51	9.78	1.96	S/Reject Ho.
First year math grade	0.59	12.05	1.96	S/Reject Ho.
First year English grade	0.34	6.11	1.96	S/Reject Ho.
General weighted average Grade in first year	0.45	8.34	1.96	S/Reject Ho.
study habits	0.29	0.74	1.96	NS/ Accept Ho.
Attitude towards Mathematics	0.35	6.17	1.96	S/Reject Ho.

Grade VI math grade. For the correlation of student-respondents grade VI math grade and level of performance in Mathematics, the computed r was 0.51. The computed t-value was 9.78, which value is greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the rejection of the hypothesis, which states, "There is no significant relationship between grade VI math grade of the student-respondents and their level of performance in Mathematics". This implies that student-respondents with poor or low grade VI math grade have low level of performance in Mathematics and those with high grade VI math grade have high performance in Mathematics. This must be

because the Mathematics knowledge and skills in grade six Mathematics serve as pre-requisite knowledge and skills in the learning their Mathematics II in high school.

First year math grade. For the correlation of first year Math grade and level of performance in Mathematics of the student-respondents, the computed r was 0.59. The computed t-value was 12.05, which absolute value is greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the rejection of the hypothesis, which states, "There is no significant relationship between the first year Math grade of the student-respondents and their level of performance in Mathematics". This means that the first year Math grade of the student-respondents is significantly related to their level of performance in Mathematics. This implies that student-respondents with poor or low first year Math grade have low level of performance in Mathematics and those with high first year Math grade will have high performance in Mathematics. This must be because the mathematics topics taught in second year needs the knowledge and skills taught in first year.

First year English grade. For the correlation of student-respondents first year English grade and their level of performance in Mathematics, the computed r was 0.34. The computed t-value was 6.11, which absolute value is greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the rejection of the hypothesis, which states, "There is no significant relationship between the first year English grade of the student-respondents and level of

performance in Mathematics". This means that the first year English grade of the student-respondents is significantly related to their level of performance in Mathematics. This implies that student-respondents with poor or low first year English grade have low level of performance in Mathematics and those with high first year English grade will have high performance in Mathematics. This must be because Mathematics is taught in English.

General weighted average (GWA) in first year. For the correlation of general weighted average grade in first year and level of performance in Mathematics, the computed r was 0.45. The computed t-value was 8.34, which value is greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the rejection of the hypothesis, which states, "There is no significant relationship between the general weighted average grade in first year and level of performance in Mathematics". This means that student-respondents with low general weighted average grade in first year have low level of performance in Mathematics and those with high general weighted average grades in first year have high performance in their Mathematics. Therefore, the general weighted average grade in first year of the student-respondents is significantly related to their level of performance in Mathematics.

Study habits. For the correlation of study habits of the student-respondents and level of performance in Mathematics, the computed r was 0.29. The computed t-value was 0.74, which absolute value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance

of the hypothesis, which states, "There is no significant relationship between study habits of the student-respondents and level of performance in Mathematics". This means that the study habits of the student-respondents is not significantly related to their level of performance in Mathematics.

Attitude towards mathematics. For the correlation of attitude towards mathematics and level of performance in Mathematics, the computed r was 0.35. The computed t-value was 6.17, which absolute value is greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the rejection of the hypothesis, which states, "There is no significant relationship between the attitude towards mathematics of the student-respondents and their level of performance in Mathematics". This means that attitude towards mathematics of the student-respondents is significantly related to their level of performance in Mathematics. This implies that student-respondents with poor or not favorable attitude towards mathematics have low level of performance in Mathematics and those with highly favorable attitude towards mathematics have high level of performance in Mathematics. This implies that positive attitude towards mathematics must be cultivated in the students to have high level of performance in Mathematics.

Teacher-related factors. Table 21 presents the relationship between level of mathematics performance of the student-respondents and the teacher-related variates, namely: age, sex, average monthly family income, highest educational

Table 21

Results of Correlation Analysis between Level of Mathematics Performance and Teacher-Related Variates

Student-Respondents Level of Mathematics Performance vs Teacher-related Variates	r_{xy}	Fisher's t-value		Evaluation/ Decision
		Computed	Critical df=279, $\alpha = 0.05$ (two tailed)	
Age	-0.01	-0.21	1.96	NS/ Accept Ho.
Sex	0.13	2.25	1.96	S/Reject Ho.
Average monthly family income	0.00	0.00	1.96	NS/ Accept Ho.
Highest educational attainment	-0.21	-3.52	1.96	S/Reject Ho.
Teaching experience	0.06	0.94	1.96	NS/ Accept Ho.
Teaching load	0.01	0.14	1.96	NS/ Accept Ho.
Number of trainings and seminars attended	0.09	1.44	1.96	NS/ Accept Ho.
Attitude towards Mathematics teaching	0.03	0.47	1.96	NS/ Accept Ho.

attainment, teaching experience, teaching load, number of trainings and seminars attended, and attitude towards mathematics teaching.

Age. For the correlation of age of the Mathematics teacher and level of Mathematics performance of the student-respondent, the computed r is -0.01. The negative r-value denotes an inverse relationship between the variables. The computed t-value is -0.21, which absolute value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance of the hypothesis, which states, "There is no significant relationship between level of

performance in Mathematics of the student-respondents and age of the mathematics teacher". This means that age of the teacher teaching Mathematics of the student-respondents is not significantly related to the students' level of performance in Mathematics.

Sex. For the correlation of sex of the Mathematics teacher and level of performance in Mathematics of the student-respondents, the computed r is 0.13. The computed t-value is 2.25, which value is greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the rejection of the hypothesis, which states, "There is no significant relationship between sex of the Mathematics teacher-respondents and level of performance in Mathematics of the student-respondents". This means that teacher's sex affect or influence the performance of the students, this implies that the level of performance in mathematics of the student under a female mathematics teacher is comparatively lower than a male mathematics teacher. This must be because, the findings of Bustos et al., that male perform better in terms of mathematical ability than the female, which still true today.

Average monthly family income. For the correlation of average monthly income of the mathematics teacher and level of Mathematics performance of their student-respondents, the computed r is 0.00. The computed t-value is 0.00, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance of the hypothesis, which states, "There is no significant relationship between average monthly income of the mathematics

teacher and level of Mathematics performance of the student-respondents". This means that the relationship between average monthly income of the mathematics teacher and level of Mathematics performance of the student-respondents is not significant. This means that the level of Mathematics performance of the student-respondents under a mathematics teacher with high income and those with low income are the same.

Highest educational attainment. For the correlation of highest educational attainment of the mathematics teacher-respondents and level of Mathematics performance of the student-respondents, the computed r is -0.21 which denoted an inverse relationship. This means that the level of Mathematics performance of the student-respondents under a mathematics teacher who were graduates of BSE only is higher compared to those under a Mathematics teacher who has completed the academic requirements towards earning a master's degree. This result which is contrary to what is expected can be explained using the profile of the mathematics-teacher respondents. The mathematics teachers who have higher educational attainment have less number of years in teaching experience compared to those who are only college graduate or holder of a BSE degree. It can be also, that the master's degree that they are pursuing is not in line with mathematics. The computed t-value is -3.52, which absolute value is greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the rejection of the hypothesis, which states, "There is no significant relationship between educational attainment of

the Mathematics teacher and level of performance in Mathematics of the student-respondents". This means that the educational attainment of the mathematics teacher is significantly related to the level of performance in Mathematics of the student-respondents.

Teaching experience. For the correlation of teaching experience of the mathematics teacher and level of Mathematics performance of the student-respondents, the computed r is 0.06. The computed t-value is 0.94, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance of the hypothesis, which states, "There is no significant relationship between teaching experience of the mathematics teacher and level of Mathematics performance of the student-respondents". This means that the level of performance in Mathematics of the student-respondents under a teacher who is new to teaching and those under teachers who have been teaching for a number of years is not significantly related.

Teaching load. For the correlation of teaching load of the Mathematics teacher and level of Mathematics performance of the student-respondents, the computed r is 0.01. The computed t-value is 0.14, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance of the hypothesis, which states, "There is no significant relationship between teaching load of the Mathematics teacher and level of Mathematics performance of the student-respondents". This means that level of performance in Mathematics of the student-respondents under a Mathematics teacher with

several teaching load is the same with those under a Mathematics teacher with less number of loads. Therefore, teaching load was not a correlate of performance.

Number of trainings and seminars attended. For the correlation of number of trainings and seminars attended by the mathematics teacher-respondents and level of Mathematics performance of the student-respondents, the computed r is 0.09. The computed t-value is 1.44, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance of the hypothesis, which states, "There is no significant relationship between number of trainings and seminars attended by the mathematics teacher-respondents and level of Mathematics performance of the student-respondents". This means that the number of trainings and seminars attended by the mathematics teacher-respondents is not significantly related to the level of performance in Mathematics of the student -respondents.

Attitude towards mathematics teaching. For the correlation of attitude towards mathematics teaching of the teacher-respondents and level of Mathematics performance of the student-respondents, the computed r is 0.03. The computed t-value is 0.47, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance of the hypothesis, which states, "There is no significant relationship between attitude towards mathematics teaching of the teacher-respondents and student-respondents' level of performance in Mathematics". This means that level of

performance in Mathematics of the student-respondents under mathematics teacher with much favorable attitude towards mathematics teaching is the same with those students under a mathematics teacher with less favorable attitude towards mathematics teaching. Therefore, teachers' attitudes towards mathematics teaching are not significantly related to the level performance of the student-respondents.

Home–related factors. The correlation between the home –related factors which includes the following -parents' age, parents' educational attainment, average family monthly income, religion, household size, extent of supervision provided to children's studies, and attitude of parents towards Mathematics and level of mathematics performance of the student-respondents is presented in Table 22.

Parents' age. For the correlation of parents' age and level of Mathematics performance, for the age of the father of the student-respondents and level of Mathematics performance, the computed r is -0.07. The negative r-value denotes an inverse relationship between the variables.

The computed t-value is -1.13, which absolute value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance of the hypothesis, which states, "There is no significant relationship between age of the father of the student-respondents and level of performance in Mathematics of the student-respondents". This means that age of the student-respondents' fathers is not significantly related to their level of performance in

Mathematics. This must be because the students are the one attending their mathematics classes so their fathers' age will not affect their Mathematics performance.

Table 22

Results of Correlation Analysis between Levels of Mathematics Performance of the Student-Respondents and Home-Related Variates

Student-Respondents' Level of Mathematics Performance vs Home-Related Variates	r_{xy}	Fisher's t-value computed	Fisher's t-value critical df=279 $\alpha = 0.05$ (two-tailed)	Evaluation/ Decision
Parents' age				
Father	-0.07	-1.13	1.96	NS/ Accept Ho.
Mother	-0.02	-0.26	1.96	NS/ Accept Ho.
Parents' educ'l attainment				
Father	0.22	3.82	1.96	S/Reject Ho.
Mother	0.22	3.83	1.96	S/Reject Ho.
Parents' religion				
Father	0.07	1.23	1.96	NS/ Accept Ho.
Mother	0.07	1.23	1.96	NS/ Accept Ho.
Ave. family monthly income	0.15	2.46	1.96	S/Reject Ho.
Household size	0.03	0.45	1.96	NS/ Accept Ho.
Extent of supervision provided by parents to children's studies	0.08	1.36	1.96	NS/ Accept Ho.
Attitude of parents towards Mathematics	0.08	1.31	1.96	NS/ Accept Ho.

For the correlation of the age of the mothers of the student-respondents and their level of Mathematics performance, the computed r is -0.02. The negative r-value denotes an inverse relationship between the variables. The

computed t-value is -0.26, which absolute value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance of the hypothesis, which states, "There is no significant relationship between age of the mothers of the student-respondents and their level of performance in Mathematics". This means that age of the mothers of the student-respondents is not significantly related to their level of performance in Mathematics. The student-respondents with older and with younger mothers do not differ as to their level of mathematics performance. This must be because the student – respondents are the ones attending their classes so their mothers' age will not influence and affect their level of mathematics performance.

Parents' educational attainment. For the correlation of parents' educational attainment and level of Mathematics performance of the student-respondents, for the fathers' educational attainment and level of mathematics performance of the student-respondents, the computed r is 0.22. The computed t-value is 3.82, which absolute value is greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the rejection of the hypothesis, which states, "There is no significant relationship between the student-respondents fathers' educational attainment and their level of performance in Mathematics". This means that student-respondents with fathers who are college graduates have high level of mathematics performance from those whose fathers are elementary graduates, which indicates that parents are helping their

children in their mathematics education at home. This implies that the student-respondents parents' education influences their mathematics performance.

For the correlation of educational attainment of the mothers of the student-respondents and their level of Mathematics performance, the computed r is 0.22. The computed t-value is 3.83, which value is greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the rejection of the hypothesis, which states, "There is no significant relationship between educational attainment of the student-respondents mothers and their level of performance in Mathematics". This means that educational attainment of the mothers of the student-respondents is significantly related to their level of performance in Mathematics. This implies that mothers can be tapped by the mathematics teachers to help improve the performance in mathematics of the student-respondents.

Parents' religion. For the correlation of religion of the parents of the student-respondents and their level of Mathematics performance, for the religion of the fathers, the computed r is 0.07. The computed t-value is 1.23, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance of the hypothesis, which states, "There is no significant relationship between the religion of the fathers of the student-respondents and their level of performance in Mathematics". This means that student-respondent whose father is a Roman Catholic do not differ in level of mathematics

performance from those whose father is a Bible Baptist, Protestant, Seventh Day Adventist, etc.

For the correlation of the religion of the mothers and level of performance of the student-respondents in mathematics, the computed r is 0.07. The computed t-value is 1.23, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance of the hypothesis, which states, "There is no significant relationship between the religion of the mothers of the student-respondents and their level of performance in Mathematics". This means that student-respondent whose mother is a Roman Catholic do not differ in level of mathematics performance from those whose mother is a Bible Baptist, Protestant, Seventh Day Adventist, etc. This must be because the students are the ones attending their mathematics classes so their mothers' religion will not affect or influence their performance.

Average family monthly income. For the correlation of average family monthly income of the student-respondents and their level of Mathematics performance, the computed r is 0.15. The computed t-value is 2.46, which value is greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the rejection of the hypothesis, which states, "There is no significant relationship between average family monthly income of the student-respondents and level of performance in Mathematics". This means that average family monthly income is significantly related to the level of performance in Mathematics of the student-respondents. The student –respondents having high

family monthly income have high level of mathematics performance. This denotes that higher monthly family income means that the students' family has learning materials at home which can be used by students in their learning of mathematics. Also, this would mean that the family can afford to hire tutors for helping students in their mathematics learning.

Household size. For the correlation of household size of the student-respondents and their level of Mathematics performance, the computed r is 0.03. The computed t-value is 0.45, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance of the hypothesis, which states, "There is no significant relationship between household size of the family of the student-respondents and their level of performance in Mathematics". This means that student-respondents having big household size and those with small household size will have the same level of performance in Mathematics. This implies that level of performance in mathematics is not influenced by household size of the family of the student-respondents.

Extent of supervision provided by parents to children's studies. For the correlation of extent of supervision provided by parents to children studies and level of Mathematics performance of the student-respondents, the computed r is 0.08. The computed t-value is 1.36, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance of the hypothesis, which states, "There is no significant relationship between extent of supervision provided by parents to children (student-respondents) studies and

level of performance in Mathematics". This means that the extent of supervision provided by parents to children studies is not significantly related to their level of performance in Mathematics. This implies that the parents of the student-respondents have the same extent of supervision provided to their children studies in mathematics.

Attitude of parents towards Mathematics. For the correlation of attitude of the parents towards Mathematics and level of Mathematics performance of the student-respondents, the computed r is 0.08. The computed t-value is 1.31, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance of the hypothesis, which states, "There is no significant relationship between attitude of the parents towards Mathematics and level of performance in Mathematics of the student-respondents". This means that attitude of the parents towards Mathematics is not significantly related to the level of performance in Mathematics of the student-respondents. A student-with high level of performance in Mathematics and those with low level of performance in mathematics have parents with the same level towards Mathematics.

Implications

The following are the implications from the findings of the study:

1. A significant correlation between level of performance in Mathematics of the student-respondents and grade VI math grade implies that

students give more time and emphasis in their mathematics subject starting in their elementary to develop their mathematics competence.

2. A significant correlation between level of performance in Mathematics of the student-respondents and grade VI math grade implies that first year mathematics teachers should use the grade VI math grade of the students as bases for grouping students as to mathematics ability for possible enrichment/enhancement/tutoring and others.

3. A significant correlation between level of performance in Mathematics of the student-respondents and grade VI math grade implies that parents should be concerned in the mathematics performance of their children in their first year by helping them in their assignment, homework, projects, exercises and the like especially if they encounter problems and difficulties in the subject.

4. A significant correlation between level of performance in Mathematics of the student-respondents and grade VI math grade implies that school administrators should enhanced the mathematics instruction in the elementary level by having additional RRE activities, contests, math clubs, math challenge, etc.

5. A significant correlation between level of performance in Mathematics of the student-respondents and first year mathematics grade implies that students with poor performance in first year mathematics should submit for tutoring by a peer, parents, teachers or a paid tutor in Mathematics to

improve their performance since it seems that there is a carry over effect as a result of the deficiencies/difficulties experienced by students in mathematics in the lower grade.

6. A significant correlation between level of performance in Mathematics of the student-respondents and first year mathematics grade the teacher in their second year mathematics should confer with their first year mathematics teacher about topics prerequisite for second year mathematics which were not taken up in their first year mathematics because of too many school activities.

7. A significant correlation between level of performance in Mathematics of the student-respondents and their first year mathematics grade implies that parents should inquire from the mathematics teacher of the performance in mathematics of their children so that as early as possible, they can help their children as home by doing their share in the mathematics education of their children by developing their study habits, tutoring, improving their attitudes, etc.

8. A significant correlation between level of performance in Mathematics of the student-respondents and first year mathematics grade implies that curriculum and textbooks writers should re-examine the topics coverage in first year mathematics which needed emphasis, re-ordering or new arrangement of skills or new presentations which would be understood better by the students.

9. A significant correlation between level of performance in Mathematics of the student-respondents and first year English grade implies that students should developed their competence in English so that their mathematics will be improved since mathematics is taught in English.

10. A significant correlation between level of performance in Mathematics of the student-respondents and first year English grade implies that teacher should diagnosed the difficulties in mathematics encountered by the students if such difficulties is due to their poor English understanding and inadequate vocabulary and should teach mathematics terms in their English class so that there is transfer of learning from one discipline to another.

11. A significant correlation between level of performance in Mathematics of the student-respondents and first year English grade implies that parents if possible should used English in their communications at home or at least some English term in their communications at home so that their child will be more competent in using English in communicating in their mathematics classes because they have practiced at home.

12. A significant correlation between level of performance in Mathematics of the student-respondents and first year English grade implies that textbook writers and curriculum writers should see to it that the English terms used in explaining topics in Mathematics should be attuned or to the level of understanding of the students so that students even with out a teacher or a tutor will understand the textbook in mathematics that they are reading.

13. A significant correlation between level of performance in Mathematics of the student-respondents and general weighted average grade in first year implies that students should ask the help of their mathematics teachers for peer tutoring or remedial mathematics instructions in subjects that they experienced difficulties like mathematics so that their performance will be enhanced.

14. A significant correlation between level of performance in Mathematics of the student-respondents and general weighted average grade in first year implies that mathematics teachers should adopt a teaching strategy which would utilized peer tutoring, group work activity, self study for improved mathematics learning if such strategy were not utilized.

15. A significant correlation between level of performance in Mathematics of the student-respondents and general weighted average grade in first year implies that parents should adopt a much improved supervision procedure to developed in their children much better study habits and favorable attitude towards studies.

16. A significant correlation between level of performance in Mathematics of the student-respondents and general weighted average grade in first year implies that school administrators should scheduled regular observations of classes to be able to get into the problems in mathematics learning of the students and mathematics teaching of the teachers so that solutions can be found as early as possible.

17. A significant correlation between level of performance in Mathematics of the student-respondents and attitude towards Mathematics implies that students should develop favorable and positive attitude towards their studies with the help of fellow students, teachers, parents, and education stakeholders, this can be done if the teacher will be able to diagnose the cause or causes of poor attitudes.

18. A significant correlation between level of performance in Mathematics of the student-respondents and attitude towards Mathematics implies that teachers should determine the students' attitudes towards mathematics and towards their studies so that efforts by the teachers and the parents would be combined towards reducing or eliminating totally negative attitude towards mathematics and towards their studies to be replaced by positive attitudes.

19. A significant correlation between level of performance in Mathematics of the student-respondents and attitude towards Mathematics implies that parents should supervised their children studies in Mathematics and in their other subjects as well, at home this can be done by asking their teachers how they can help their children improved their performance during PTCA meetings and they should learn how to interpret the school reports provided by the teachers and should act on it.

20. A significant correlation between level of performance in Mathematics of the student-respondents and attitude towards Mathematics

implies that school administrators separately should conduct survey of the performance of students in Mathematics and other subjects so that they will have first hand knowledge of the situation existing in the classroom and should institute curriculum redirection.

21. A significant correlation between level of performance in Mathematics of the student-respondents and sex of the Mathematics teacher implies that students should not show gender bias towards their mathematics teachers which can be seen in their attitude towards their teacher.

22. A significant correlation between level of performance in Mathematics of the student-respondents and sex of the Mathematics teacher implies that teachers in Mathematics should consider gender in assigning school tasks for students. He/she should not show gender bias with respect to students' performance in mathematics and in evaluating students' performance in mathematics.

23. A significant correlation between level of performance in Mathematics of the student-respondents and sex of the Mathematics teacher implies that parents should approach the mathematics teacher regarding problems of the mathematics performance of their child especially when their child cannot approach the teacher because he is a male in the case of female students and female in the case of male students.

24. A significant correlation between level of performance in Mathematics of the student-respondents and sex of the Mathematics teacher

implies that administrators and other education stakeholders should considers gender sensitive issues in formulating and implementing school policies, activities, and others.

25. A significant correlation between level of performance in Mathematics of the student-respondents and highest educational attainment of the Mathematics teacher implies that mathematics teachers should pursue advanced studies in Mathematics and attend seminars in Mathematics so that they well become very competent in teaching Mathematics.

26. A significant correlation between level of performance in Mathematics of the student-respondents and highest educational attainment of the Mathematics teacher implies that parents should help in the mathematics performance of their children by providing them with mathematics books, encyclopedias, computers, internet and others.

27. A significant correlation between level of performance in Mathematics of the student-respondents and highest educational attainment of the Mathematics teacher implies that school administrators should encourage their mathematics teachers to pursue advanced studies in mathematics by giving them scholarships and sending them to attend seminars and trainings so that they will be motivated to developed or produced instructional materials, modules, workbooks in mathematics which they can use to augment the meager supply of books in Mathematics and instructional materials distributed to them by the DepEd.

28. A significant correlation between level of performance in Mathematics of the student-respondents and highest educational attainment of the Mathematics teacher implies that parents should play active roles in the Mathematics education of their children especially if the teacher in mathematics is a new and fresh graduate teacher by helping the mathematics teacher by providing their children with books in mathematics, and other mathematics aids and devices so that the teacher will have more time for the students.

29. A significant correlation between level of performance in Mathematics of the student-respondents and educational attainment of the parent-fathers implies that students should involved their fathers in their mathematics education by asking them for help with their school homework, assignment, problem sets or exercises, school projects, and the like.

30. A significant correlation between level of performance in Mathematics of the student-respondents and educational attainment of the parent-fathers implies that teachers should encourage parents' involvement in the education of their children by assigning them in mathematics projects/activities which will involve the parents, in this way there will be closer bonding between the parents and the child and between the parents and the school.

31. A significant correlation between level of performance in Mathematics of the student-respondents and educational attainment of the parent-fathers implies that parents should be made directly responsible for the

academic performance of their children so that they will do their share in the education of their children, they should encourage their children study their mathematics by showing their interest towards their mathematics subject and their school performance as a whole.

32. A significant correlation between level of performance in Mathematics of the student-respondents and educational attainment of the parent-fathers implies that education stakeholder should tap the fathers of the students for an enhance learning at home which can be done by making the fathers of the students as tutors/mentors/confidante of their children so that problems regarding poor performance would be minimized and reduced.

33. A significant correlation between level of performance in Mathematics of the student-respondents and educational attainment of the parent-mothers implies that students should present his/her problems regarding low/poor performance to their mothers first so that they can plan how to improve such performance. Students who excel can present the same problem to their mothers so that they can plan additional enrichment activities/lessons through the help of the teacher or a tutor.

34. A significant correlation between level of performance in Mathematics of the student-respondents and educational attainment of the parent-mothers implies that teachers in mathematics should presents the problems of poor performance in mathematics of the students and have a talk

with her or both parents how both efforts can be joined together for better performance of the student.

35. A significant correlation between level of performance in Mathematics of the student-respondents and educational attainment of the parent-mothers implies that parents should do their part in the education of their children by improving their study habits, making their children do self study, assigning themselves as tutors, hiring of tutors if it is not possible for them to tutor them, having a better bonding and explaining to them the importance of education.

36. A significant correlation between level of performance in Mathematics of the student-respondents and educational attainment of the parent-mothers implies that school administrators should consider the educational attainment of the mothers of their students in their planning for better mathematics achievement of the students such as in the choice of textbooks, workbooks, exercises to use, as well as in the establishment of mathematics clinics, mathematics clubs and contest like Damath since it is the mothers who are most of the time left to attain to the education of their children.

37. A significant correlation between level of performance in Mathematics of the student-respondents and average family monthly income of the family of the student-respondents implies that students who can share resources to their classmates should cultivate such attitude to maximize the use

of resources specially if in doing so will contribute to his learning of mathematics and that of his/her classmates.

38. A significant correlation between level of performance in Mathematics of the student-respondents and average family monthly income of the family of the student-respondents implies that teachers should give assignment, homework, exercises, and projects in their mathematics classes considering the average family monthly income of the majority of his/her students so that they will not be burdened if it will entails a lot of expense.

39. A significant correlation between level of performance in Mathematics of the student-respondents and average family monthly income of the family of the student-respondents implies that parents who can well afford should share their resources to other children which would enhanced mathematics learning not only of their child but other children as well.

40. A significant correlation between level of performance in Mathematics of the student-respondents and average family monthly income of the family of the student-respondents implies that school administrators should widen their linkages to include parents and other community residents for possible donations of school facilities, teaching aids and devices in mathematics which can be used by the students and teacher.

Chapter 5

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter provides the summary of findings, the corresponding conclusions, and recommendations that were formulated.

Summary of Findings

From the data collected, organized, and analyzed, the findings obtained were the following:

1. The second year high school student-respondents from integrated schools have mean age of 14.74 years old, majority of them female, with mean grades of 82.81 in elementary mathematics (Grade VI Mathematics), 82.44 in first year math, 82.79 in their first year English, and 83.18 for their GWA in first year.

2. The student-respondents exhibited good study habits as indicated by the grand mean obtained of 3.67 interpreted as "often practiced" and they exhibited a highly favorable attitude towards Mathematics with a grand mean of 3.71 interpreted as "agree" or "highly favorable" attitude towards Mathematics.

3. The Mathematics teacher-respondents have mean age of 34.00 years old dominated by males, with mean income of PhP11,812.50, majority of the teacher-respondents are college graduates (BSED), have a teaching experience of less than 10 years, have five or six teaching loads, and have 10 seminars/trainings each.

4. The teacher-respondent's attitude towards mathematics teaching obtained a grand mean of 4.50 interpreted as "agree" or "higly favorable" attitude towards Mathematics teaching.

5. The student-respondents fathers have a mean age of 45.63 years old and their mothers' mean age is 42.22 years old, the majority of the fathers and mothers reached elementary level of education only, the majority of the father and mother are Roman Catholic, with mean family income of PhP 5, 161.39, and the mean household size is 7 members or big households.

6. The parents' extent of supervision provided on their children's studies obtained a grand mean of 3.71 interpreted as "agree" or parents to a much extent are doing their share in the education of their children.

7. The parents' attitude towards mathematics obtained a grand mean of 3.65 interpreted as "agree", which indicated a highly favorable attitude towards mathematics.

8. The level of mathematics performance of the student-respondents based on a 50-item Mathematics Achievement Test prepared by the researcher, obtained a mean score of 25.62 interpreted as fair performance.

9. The relationship between the student-respondents' level of mathematics performance and their age obtained a computed r of -0.01, the computed t-value is -0.15, which absolute value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279, the hypothesis, "There is no

significant relationship between age of the student-respondents and their level of performance in Mathematics" is accepted.

10. The relationship between the student-respondents' level of mathematics performance and their sex obtained a computed r of -0.03, and a computed t-value of -0.42, which absolute value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279, the hypothesis, "There is no significant relationship between sex of the student-respondents and their level of performance in Mathematics" is accepted.

11. The relationship between the student-respondents' level of mathematics performance and their grade VI math grade obtained a computed r of 0.51. The computed t-value was 9.78, which value is greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279, the hypothesis, "There is no significant relationship between grade VI math grade of the student-respondents and their level of performance in Mathematics" is rejected.

12. The relationship between the student-respondents' level of mathematics performance and their first year mathematics grade obtained a computed r of 0.59. The computed t-value was 12.05, which absolute value is greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279, the hypothesis, "There is no significant relationship between the first year Math grade of the student-respondents and their level of performance in Mathematics" is rejected.

13. The relationship between the student-respondents' level of mathematics performance and their first year English grade obtained a computed r of 0.34. The computed t-value was 6.11, which value is greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279, the hypothesis, "There is no significant relationship between the first year English grade of the student-respondents and level of performance in Mathematics" is rejected.

14. The relationship between the student-respondents' level of mathematics performance and their general weighted average (GWA) grade in their first year obtained a computed r of 0.45. The computed t-value was 8.34, which value is greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279. The hypothesis, "There is no significant relationship between the general weighted average grade in first year and level of performance in Mathematics" is rejected

15. The relationship between the student-respondents' level of mathematics performance and their study habits obtained a computed r of 0.29. The computed t-value was 0.74, which absolute value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279, the hypothesis, "There is no significant relationship between study habits of the student-respondents and level of performance in Mathematics" is accepted.

16. The relationship between the student-respondents' level of mathematics performance and their attitude towards mathematics obtained a computed r of 0.35. The computed t-value was 6.17, which absolute value is

greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279. The hypothesis, "There is no significant relationship between the attitude towards mathematics of the student-respondents and their level of performance in Mathematics" is rejected.

17. The relationship between level of mathematics performance of the student-respondents and age of the Mathematics teacher obtained a computed r of -0.01. The computed t-value is -0.21, which absolute value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance of the hypothesis, which states, "There is no significant relationship between level of performance in Mathematics of the student-respondents and age of the mathematics teacher".

18. The relationship between level of mathematics performance of the student-respondents and sex of the Mathematics teacher obtained a computed r of 0.13. The computed t-value is 2.25, which value is greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the rejection of the hypothesis, which states, "There is no significant relationship between sex of the Mathematics teacher-respondents and level of performance in Mathematics of the student-respondents".

19. The relationship between level of mathematics performance of the student-respondents and average monthly income of the Mathematics teacher obtained a computed r of 0.00. The computed t-value is 0.00, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led

to the acceptance of the hypothesis, which states, "There is no significant relationship between average monthly income of the mathematics teacher and level of Mathematics performance of the student-respondents".

20. The relationship between level of mathematics performance of the student-respondents and educational attainment of the Mathematics teacher obtained a computed r of -0.21. The computed t-value is -3.52, which absolute value is greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the rejection of the hypothesis, which states, "There is no significant relationship between educational attainment of the Mathematics teacher and level of performance in Mathematics of the student-respondents".

21. The relationship between level of mathematics performance of the student-respondents and teaching experience of the Mathematics teacher obtained a computed r of 0.06. The computed t-value is 0.94, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance of the hypothesis, which states, "There is no significant relationship between teaching experience of the mathematics teacher and level of Mathematics performance of the student-respondents".

22. The relationship between level of mathematics performance of the student-respondents and teaching load of the Mathematics teacher obtained a computed r of 0.01. The computed t-value is 0.14, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance of the hypothesis, which states, "There is no significant relationship

between teaching load of the Mathematics teacher and level of Mathematics performance of the student-respondents".

23. The relationship between level of mathematics performance of the student-respondents and number of trainings and seminars attended of the Mathematics teacher obtained a computed r of 0.09. The computed t-value is 1.44, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance of the hypothesis, which states, "There is no significant relationship between number of trainings and seminars attended by the mathematics teacher-respondents and level of Mathematics performance of the student-respondents".

24. The relationship between level of mathematics performance of the student-respondents and attitude towards mathematics teaching of the Mathematics teacher obtained a computed r of 0.03. The computed t-value is 0.47, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. This led to the acceptance of the hypothesis, which states, "There is no significant relationship between attitude towards mathematics teaching of the teacher-respondents and student-respondents' level of performance in Mathematics".

25. The relationship between level of mathematics performance of the student-respondents and parent-fathers' age obtained an r-value of -0.07. The computed t-value is -1.13, which absolute value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. The hypothesis, "There is no

significant relationship between age of the fathers of the student-respondents and level of performance in Mathematics of the student-respondents" is accepted.

26. The relationship between level of mathematics performance of the student-respondents and parent-mothers' age obtained an r-value of -0.02. The computed t-value is -0.26, which absolute value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. The hypothesis, "There is no significant relationship between age of the mothers of the student-respondents and their level of performance in Mathematics" is accepted.

27. The relationship between level of mathematics performance of the student-respondents and parent-fathers' educational attainment obtained an r-value of 0.22. The computed t-value is 3.82, which absolute value is greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279. The hypothesis, "There is no significant relationship between the student-respondents fathers' educational attainment and their level of performance in Mathematics" is rejected.

28. The relationship between level of mathematics performance of the student-respondents and parent-mothers' educational attainment obtained an r-value of 0.22. The computed t-value is 3.83, which value is greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279. The hypothesis, "There is no significant relationship between educational attainment of the

student-respondents mothers and their level of performance in Mathematics" is rejected.

29. The relationship between level of mathematics performance of the student-respondents and parent-fathers' religion obtained an r-value of 0.07. The computed t-value is 1.23, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. The hypothesis, "There is no significant relationship between the religion of the fathers of the student-respondents and their level of performance in Mathematics" is accepted.

30. The relationship between level of mathematics performance of the student-respondents and parent-mothers' religion obtained an r-value of 0.07. The computed t-value is 1.23, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. The hypothesis, "There is no significant relationship between the religion of the mothers of the student-respondents and their level of performance in Mathematics" is rejected.

31. The relationship between level of mathematics performance of the student-respondents and the average family monthly income of their family obtained an r-value of 0.15. The computed t-value is 2.46, which value is greater than the critical t-value of 1.96 at 0.05 level of significance and df = 279. The hypothesis, "There is no significant relationship between average family monthly income of the student-respondents and level of performance in Mathematics" is rejected.

32. The relationship between level of mathematics performance of the student-respondents and their household size obtained an r-value of 0.03. The computed t-value is 0.45, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. The hypothesis, "There is no significant relationship between household size of the family of the student-respondents and their level of performance in Mathematics" is accepted.

33. The relationship between level of mathematics performance of the student-respondents and extent of supervision provided by the parents to their children studies obtained an r-value of 0.08. The computed t-value is 1.36, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. The hypothesis, "There is no significant relationship between extent of supervision provided by parents to children (student-respondents) studies and level of performance in Mathematics" is accepted.

34. The relationship between level of mathematics performance of the student-respondents and attitude of parents towards mathematics obtained an r-value of 0.08. The computed t-value is 1.31, which value is less than the critical t-value of 1.96 at 0.05 level of significance and df = 279. The hypothesis, "There is no significant relationship between attitude of the parents towards Mathematics and level of performance in Mathematics of the student-respondents" is accepted.

Conclusions

The following were the conclusions based from the salient findings of the study:

1. Majority of the student respondents Integrated School were in their right age; dominated by females; had a satisfactory performance grades in elementary mathematics, grades in first year math, grades in first year English, general weighted average (GWA) in first year; had a good study habits and had a highly favorable attitudes towards mathematics.

2. Majority of the teachers respondents in Integrated School were in their late thirties; dominated by males; mostly college graduates (BSED); had a regular teaching load, had a teaching experience of more than four years; had almost the same number of seminars and training in mathematics attended and belong to a low income group since their income is below the poverty threshold.

3. The home characteristic of the student-respondents their parents were in their early forties; had a low level of education; Roman Catholic with household size of seven members; had a good supervision provided on their children studies; had a highly favorable attitude in mathematics and had a low income because they belong below the poverty line threshold.

4. Based on the Mathematics Achievement Test result, the student-respondents of Integrated School of Samar Division has good performance.

5. The students-related factors which are significantly related to the level of Mathematics performance of the student-respondents are grade VI math

grade, first year math grade, first year English grade, general weighted average grade in first year, and attitude towards mathematics.

6. The teacher-related factors which are significantly related to the level of Mathematics performance of the student-respondents are sex, and highest educational attainment.

7. The home-related factors which are significantly related to the level of Mathematics performance of the student-respondents are parents' educational attainment and average monthly family income.

Recommendations

The following were the recommendations based on the findings and conclusions derived from the study:

1. The teachers should diagnose the students for pre-requisite skills in Mathematics by giving them a diagnostic test which will cover content or the minimum learning competency of every year level since higher level skills is build up from lower level skills.

2. The identified common deficiencies/difficulties of the students in mathematics based on result of the diagnostic test should be made as input for curriculum planners and textbooks writers to improve the presentation of mathematics topics from simple to complicated, so that simple skills is developed in the learners before more complicated one.

3. Before new topic is introduced to the learners, the mathematics teachers must evaluate the competency of the students in their previous topics by giving them a test on content mastery and computational skills.

4. The Mathematics curricula should emphasize interactions between learners and learning tasks, the teachers must continually adjust the level of his or her help in response to student's level of performance.

5. The mathematics teacher should sequence instruction and identify prerequisites skills that should be completed in the learning hierarchy.

6. Mathematics learning by all students should be the main concern of school administrator, teachers and other education stakeholders.

7. The school mathematics curriculum should be tailored for enhanced classroom instruction in Mathematics.

8. The school should invest on teacher's professional development and capacity building to support improved mathematics achievement.

9. The mathematics teachers in public high schools should use the researcher-made Mathematics Achievement Test in their students to determine their level of performance in mathematics.

10. School administrators in public high schools should encouraged their mathematics teachers to take advanced studies since majority of them are in their undergraduate degrees only.

11. School administrators in public high schools should encouraged their mathematics teachers to construct Diagnostic Test or a Mathematics

Achievement Test for the different year levels which can be used to improve performance of students in mathematics.

12. School administrators in public high schools should send their mathematics teachers to seminars in mathematics content and teaching so that they will be more competent in teaching mathematics.

13. Mathematics teachers should be encouraged to use other strategies such as multi-media to expose their students to varied teaching strategies which will develop positive attitude in their students towards Mathematics.

14. Mathematics teachers should be trained to developed diagnostic and achievement test which they can use in evaluating student's performance and their teaching effectiveness.

15. The parents should do their share in the mathematics education of their children.

16. Another research should be conducted to verify the findings of this study.

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APPENDICES

APPENDIX A

COVER LETTER OF THE QUESTIONNAIRE FOR THE RESPONDENTS

Republic of the Philippines
SAMAR STATE UNIVERSITY
Catbalogan, Samar

March 3, 2009

Dear Respondents,

I am presently conducting a research entitled "Correlates of Mathematics Performance of Second Year High School Students in the Integrated Schools in the Division of Samar" in partial fulfillment of the requirements for the degree, Master of Arts in Teaching Mathematics.

In this connection, you are chosen to be one of the respondents of this study. Rest assured that your answers would be kept with utmost confidentiality.

Thank you very much.

Very truly yours,

(Sgd.) JOEL R. SINTOS
Researcher

QUESTIONNAIRE
(For the Student-Respondents)

I- PERSONAL PROFILE

Direction: Please supply the needed information.

Name: _____ Age: _____ Sex:_____
Grade VI Math Grade: _____ First Year Math Grade: _____
First Year English Grade: _____GWA Grade for First Year: _____

II- STUDENT STUDY HABITS

Direction: Beside each of the statements presented below, please indicate whether it is always practiced (AP), often practiced (OP), moderately practiced (MP), sometimes practiced (SP), and not practiced (NP)

Study Habits Statements	SCALE				
	AP (5)	OP (4)	MP (3)	SP (2)	NP (1)
1. I study in a silent room with sweet music in the background.					
2. I study and watch TV at the same time.					
3. I read my books, notes and study my lessons during early morning.					
4. At home, I study in a well lighted and well ventilated place/room and I do it before I sleep.					
5. If I cannot solve my assignment at home I come to school early so that I can ask my classmates and teachers about it.					
6. I go and visit the school library to read and study during my vacant time in school.					
7. I scan and read my notes and books in the classroom if the teacher is not starting the class discussion yet.					
8. I always double check my solutions before I submit to my teacher my test, quiz, exercises, and assignments especially if there is still time.					

Study Habits Statements	SCALE				
	A P (5)	O P (4)	M P (3)	SP (2)	N P (1)
9. I ask the correct answer for numbers which were marked wrong by my teacher when my paper is returned after it is corrected.					
10. I try to work on my own and asked the help of my classmates and teachers only if I have exhausted all my efforts and still I cannot figure out what is wrong with my solutions/answer in a math problem.					
11. I utilize my vacant hours between classes to go to the library to read books and journals in mathematics.					
12. I prefer to study alone rather than with others.					
13. During lectures and class discussion I copy and take notes the theorems, principles, postulates, and others written by the teacher.					
14. I read my math textbooks and other references at home before I go to sleep everyday for one hour.					
15. I work with my members in group projects assigned by our teacher such as using the INTERNET, computers among others.					
16. I memorized math theories, postulates, theorems, principles as often as I have time.					
17. I try other methods in solving math problems aside from the one taught by our teacher.					
18. I study my math lessons three times a week even if there is no scheduled quiz for that day.					
19. I work on my math assignment the first thing when I arrived home.					
20. I study my math lessons with classmate(s) everyday for at most one hour.					

III- STUDENT'S ATTITUDE TOWARDS MATHEMATICS

Direction: Beside each of the statements presented below, please indicate whether you strongly agree (SA), agree (A), neutral (N), disagree (D), and strongly disagree (SD).

Attitude Statements	Scale				
	SA (5)	A (4)	N (3)	D (2)	SD (1)
1. I find mathematics an interesting subject.					
2. I wish I could take more mathematics subjects other than those offered in my course.					
3. Mathematics makes me feel relaxed, happy and comfortable.					
4. I feel alive and alert in my mathematics class.					
5. I find the textbook in math very interesting.					
6. I believe that math is needed in my daily life.					
7. I love Mathematics it develops in me a feeling of superiority and importance.					
8. I appreciate students/classmates who try their best to solve problems in mathematics.					
9. I like to recite and participate in the seatwork and board work in Mathematics.					
10. I like that my teacher gives several examples before giving individual exercises, seatwork and board work.					
11. I always like to attend my math class than any other classes.					
12. I always like to do my assignments, home work, problem sets, exercises, and projects in math on my own rather than ask someone to help me.					
13. I make it my concern to go to the library to look for references in mathematics.					
14. I study in advance in my math subject than my other subjects.					
15. I always asked my teachers for clarifications of a topic/lesson in math that I do not understand.					
16. I ask my teacher in class or after our class to explain to me topics in math that I am not clarified about.					

Attitude Statements	Scale				
	SA (5)	A (4)	N (3)	D (2)	SD (1)
17. I ask others for help in my math lessons and assignment if my teacher and classmates are not available.					
18. I give special attention to the accuracy of the solutions I do whenever the teacher gives exercises in class.					
19. I don't hesitate to ask my teacher questions about our math lessons that would help me understand mathematics better.					
20. When I have doubt about the correct solutions to the problem given, I refer to a book to follow.					

Appendix B

QUESTIONNAIRE
(For the Parent-Respondents)

Student Name: _____

I- HOME PROFILE: (Please ask your parents to answer this section.)

Name of Parents:
Father: _____ Mother: _____

Educational Attainment:
Father: _____ Mother: _____

Religion of parents:
Father: _____ Mother: _____

House hold size : _____
Please count the total number of persons living in the house (parents, children, other relatives living with the family)

Average family income: _____
Total income of the family (Income of parents and unmarried children)

II- EXTENT OF SUPERVISION PROVIDED BY PARENTS TO CHILDREN'S STUDIES

Direction: To the parents, please use the scale provided for your responses to this portion of the questionnaire.

5 - Strongly Agree
4 - Agree
3 - Neutral
2 - Disagree
1 - Strongly Disagree

Statement Indicators	Scale				
	SA (5)	A (4)	N (3)	D (2)	SD (1)
1. I always attend PTA meetings called for by the teachers as much as possible.					
2. I regularly visit the school to inquire from the teachers the performance of my child in every subject and his/her over-all performance.					
3. I help my child in his/her /home work, assignment and projects.					
4. I make a follow-up in school of matters that affect my child.					
5. I show interest in the grades that my child get.					
6. I hire private tutor(s) to keep my child school performance at par with classmates.					
7. I show appreciation of my child achievement in school by attending programs and convocations in which my child will be awarded a certificate, medal, cash prizes and the like.					
8. I served as teacher of my child at home in his/her assignment/home work/ and school projects.					
9. I provide for the financial needs of my child such as expenses for projects, school field trips, and the like.					
10. I give my child reward for good school performance such as increase of school allowance, new school bags and other personal things,					

III- PARENTS' ATTITUDE TOWARDS MATHEMATICS

Direction: To the parents, please use the scale provided for your response to this portion of the questionnaire.

5 - Strongly Agree
4 - Agree
3 - Neutral
2 - Disagree
1 - Strongly Disagree

Statement Indicators on Attitude towards Mathematics	Scale				
	SA (5)	A (4)	N (3)	D (2)	SD (1)
1. I help my child with his/her mathematics assignment at home.					
2. I like that math teachers give several examples before giving my child assignment and homework.					
3. I like that my child will recite and participate in his/her math class.					
4. I don't want that my child will make absences in his/her mathematics classes.					
5. I like that my child will have references in math other than the textbook.					
6. I would hire a private tutor for my child in mathematics to improve my child school performance.					
7. I would ask my child math teacher in school to explain to me topics in math that I am not clarified about in order to help my child in math.					
8. I will study my child math lessons in advanced to help him/her in his assignment, home work and project.					
9. I would like that my child will do her home work and assignment in math with my help.					
10. If my child will excel in mathematics I will give her reward for good school performance.					

Appendix C

QUESTIONNAIRE
(For the Mathematics Teacher-Respondents)

I- Personal Profile:

Direction: Please supply the needed information.

Name:_____ Age: _____ Sex: _____
(Optional)
Ave. Family Income Per Month: _____ Highest Educ. Attainment: _____
Teaching Experience : _____ Teaching Load: _____
Number of Seminars/Training Attended: _____

II- ATTITUDE TOWARDS MATHEMATICS

Direction: Beside each of the statements presented below, please indicate whether you strongly agree (SA), agree (A), neutral (N), disagree (D), and strongly disagree (SD).

Attitude Statements	Scale				
	SA (5)	A (4)	N (3)	D (2)	SD (1)
1. I appreciate students who try their best to solve problems in mathematics on their own or in groups.					
2. I gives several examples before giving my students individual exercises, seatwork and board work.					
3. I make it my concern to buy my own mathematics book and go to the library to look for references in mathematics or use the INTERNET.					
4. I prepare in advance of my math lessons for the class.					
5. I ask my students in class to explain to me and to the class their conjectures, solutions to problems during our math class.					
6. I give special attention to the accuracy of facts, formula, principles, theories, solutions in Math whenever I gives exercises in class.					
7. I let my pupils realize that it is important to enjoy mathematics.					

Attitude Statements	Scale				
	SA (5)	A (4)	N (3)	D (2)	SD (1)
8. I find people who can do math clever.					
9. I believe I still would want to be a mathematics teacher given the chance to live life all over again.					
10. When I see mathematically gifted pupils I encourage them to pursue a career in math.					
11. I allow my pupils to talk to me about what they think and feel towards mathematics and their problems toward learning math.					
10. Teaching mathematics to high school students enhance my knowledge of the subject and encourage me to have faith in my pupils' ability to learn the subject .					
12. I like teaching mathematics to my pupils because I believe that the subject is useful to the development of every individual.					
13. Mathematics teaching is interesting and rewarding to me.					
14. I don't hesitate to ask help from my co-teachers about math topics/lessons that I would teach it to my class, if I am not very knowledgeable and confident about it.					
15. Math is fun much is learned from a wrong answer as from a right one.					
16. I like math since I enjoy using guesswork in solving problems and there is no half right answers.					
17. I like Math because it is mostly expressed in symbols and not in words.					
18. I like math for the symbols and numbers used have specific meaning.					
19. I find beauty in the algorithm for getting things done in Math.					
20. I like to teach math because I am regarded very high by my students.					

Appendix D

MATHEMATICS ACHIEVEMENT TEST

Name:_____ Year & Section:_____ Score: _____

Directions: Read the statement carefully, select the best answer and write the letter only on the space provided before the number.

Begin Here:

__ 1. Solve: $x + y = 9$
$x - y = -5$

A. (3, -6) B. (2,-7) C. (2, 7) D. (3, 6)

__ 2. Which of the following equations has NO solution?

A. $x + 2y = 6$
$x - 2y = 4$

B. $x + 2y = 6$
$x + 2y = 4$

C. $x + 2y = 6$
$x + 4y = 12$

D. $x + 2y = 6$
$x - 4y = 12$

__ 3. Solve: $7x - 2y = 1$
$y = 3x$

A. (-1/2, 3/2) B. (-1, 3) C. (1/2, 3/2) D. (1, 3)

__ 4. Which of the following pairs of equations has the solution (4, 8)?

A. $5x + 2y = 4$
$2x + y = 0$

B. $5x - 2y = 4$
$2x + y = 0$

C. $5x + 2y = 4$
$2x - y = 0$

D. $5x - 2y = 4$
$2x - y = 0$

__ 5. Which of the following is the correct translation of the phrase "Three is greater than 2 and less than 3.5"?

A. $2 < 3 < 3.5$ B. $2 < 3 > 3.5$ C. $2 > 3 < 3.5$ D. $2 > 3 > 3.5$

__ 6. What is the translation of the phrase "x is greater than -3 and less than 4"?

A. $4 < x > -3$ B. $4 > x < -3$ C. $4 > x > -3$ D. $4 < x < -3$

__ 7. Solve for x: $x^2 - 7x + 12 = 0$

A. (6, -2) B. (3,4) C. (3, -4) D. (6, 2)

__ 8. Which of the following pairs of values of x satisfies the equation $x^2 - 9x + 20 = 0$?

A. 4, 5 B. 2, 10 C. 2, -10 D. -4, 0

__ 9. Which of the following equations has these roots: x = 2 or x = -8?

A. $x^2 - 6x = 16$ B. $x^2 + 6x = 16$ C. $x^2 - 6x = -16$ D. $x^2 + 6x = -16$

__ 10. What constant should be added to both sides of the equation $x^2 + 4x = 12$ so that it can be solved by completing the square?

A. 2 B. 4 C. 6 D. 8

__ 11. Which of the following rational expressions is already in its simplest form?

A. $\frac{y-4}{4-y}$ B. $\frac{2y-7}{2y+7}$ C. $\frac{x-2}{x^2-4}$ D. $\frac{4x-12}{6-2x}$

__12. What is the simplest form of $\frac{8x+12}{-7}$?

A. x+8 B. 2x+3 C. –x-3 D. -2x-3

__ 13. What is $\frac{x}{y} + \frac{x}{y}$ equal to?

A. $\frac{2x}{y}$ B. $\frac{x}{y}$ C. $\frac{x^2}{y}$ D. $\frac{x^2}{y^2}$

__ 14. What is the perimeter of a rectangular lot whose dimensions are $\frac{x}{2x}$ units by 5 units?

A. x+5 units B. x+10 units C. $\frac{x^2+10}{x}$ units D. $\frac{x^2+10}{2x}$

__ 15. What should be subtracted from $\frac{8ab}{2a^2}$ so that the result is $\frac{b}{a}$?

A. 2ab B. 6ab C. $\frac{3b}{a}$ D. $\frac{3a^2}{b}$

__ 16. What is $\frac{a+2}{3} - \frac{a}{5}$ equal to?

A. $\frac{2}{15}$ B. ¼ C. $\frac{2(a-5)}{8}$ D. $\frac{2(a+5)}{15}$

__ 17. What is the product of $\frac{(xy)^2}{3x} \cdot \frac{x}{(2y)^2}$?

A. $\frac{x^2}{6}$ B. $\frac{x}{12y}$ C. $\frac{x^2}{6y}$ D. $\frac{x}{12}$

__ 18. Which of the following pairs of rational expressions when multiplied gives a product of $\frac{3}{a+1}$?

A. $\frac{9}{a+1}$ and $\frac{(a+1)^2}{3}$ B. $\frac{9}{(a+1)^2}$ and $\frac{(a+1)^2}{3}$ C. $\frac{9a}{(a+1)^2}$ and $\frac{a+1}{3}$ D. $\frac{9a}{(a+1)^2}$ and $\frac{a+1}{3a}$

__ 19. What is the quotient of $\frac{3}{4xy^2}$ divided by $\frac{1}{8y}$?

A. xy^3 B. $6/x$ C. $6/xy$ D. $12xy$

__ 20. The area of a rectangular lot is $x^2/x-y$ square units. Its width is $x/x+y$ units. What is its length?

A. $x/x+y$ B. $2x/x-y$ C. $x^2/x-y$ D. $2x^2/x+y$

__ 21. What is the value of x in $\frac{x-5}{x+10} = \frac{4}{9}$?

A. 17 B. 10 C. 9 D. 4

__ 22. If $6+ x/3 = 9$, what is the value of $2x$?

A. 6 B. 12 C. 18 D. 36

__ 23. What variation applies to the given relation shown on the graph below?

A. direct square B. inverse C. direct D. joint

__ 24. The table below shows the relation between the area of a circle (A) and its radius (r).

R	1	4	9
A	3.14	12.56	28.26

What type of variation relates the two quantities?

A. direct square B. inverse C. direct D. joint

__ 25. What variation gives meaning to the relation for x and y such that as x increases, y decreases?

A. direct B. inverse C. joint D. direct square

__ 26. The area of a triangle depends on the lengths of its base and height. What variation represents this relationship?

A. direct B. inverse C. joint D. direct square

__ 27. Which of the following equations represents this relationship: s is directly proportional as p?

A. $k = sp$ B. $k = p/s$ C. $k = s/p$ D. none of these

__ 28. What is the simplified form of $\frac{18x^5y^4z^{-3}}{3x^4y^{-1}z^2}$?

A. $\frac{6xy^5}{z^5}$ B. $\frac{6x}{Y}$ C. $\frac{15xz}{z}$ D. 1

__29. What is the value of $[256a^3b^2]^0$

A. 0 B. 1 C. $\frac{256b^2}{a^3}$ D. $256a^3b^2$

__ 30. What is the simplified form of $\frac{32x^5y^4}{4x^2y}$?

A. $8x^2y$ B. $8xy$ C. $2x^2y$ D. $2xy$

__ 31. What is the simplified form of $\sqrt{18x^3y^3}$?

A. $3x^2y^2\ 2xy$ B. $9x^2y^2\ xy$ C. $3xy\ 2xy$ D. $9xy\ xy$

__ 32. What is $7\sqrt{3a} + \sqrt{3a}$ equal to?

A. $7\sqrt{3a}$ B. $8\sqrt{3a}$ C. $7\sqrt{6a}$ D. $8\sqrt{6a}$

__ 33. What is the result when the indicated operation is performed on $5\sqrt{32y} - 4\sqrt{18y}$?

A. $\sqrt{2y}$ B. $\sqrt{3y}$ C. $6\sqrt{3y}$ D. $8\sqrt{2y}$

__34. What is $4y\ (3x^2y)$ equal to?

A. $7xy$ B. $12xy$ C. $7x\sqrt{y}$ D. $12x\sqrt{y}$

__ 35. Solve: $1 + \sqrt{x-8} = 6$

A. 33 B. 28 C. 22 D. 13

__ 36. Solve: $\frac{\sqrt{5x-9}}{2} = 3$.

A. 9 B. 15 C. 22 D. 27

__ 37. The 3rd term of an arithmetic sequence is 15 and the 15th term is 99. What is the common difference of the sequence?

A. 5 B. 6 C. 7 D. 8

__ 38. In the arithmetic sequence -4, -1, 2... what term is 20?

A. 11^{th} B. 10^{th} C. 9^{th} D. 8^{th}

__ 39. Determine the common ratio of the sequence -3, 6, -12, 24...

A. 3 B. 2 C. -3 D. -2

__ 40. Find the 5^{th} and 8^{th} terms of the geometric sequence 1, 2, 4, 8...

A. 19 and 43 B. 16 and 128 C. 13 and 34 D. 8 and 64

__ 41. What is the first term of a Geometric sequence whose 5^{th} and 7^{th} are 112 and 1792, respectively?

A. 3 B. 5 C. 7 D. 9

__ 42. Determine the common ratio of a geometric sequence whose 4^{th} and 6^{th} terms are 64 and 1024, respectively.

A. 4 B. 2 C. 5 D. 3

__ 43. Lolit bought a total of big and small notebooks worth P 550.00. A big notebook costs P 25.00 each while a small one costs P 20.00 each. How many small notebooks did she buy?

A. 10 B. 12 C. 13 D. 15

__ 44. In a game, the score of Ramon is 3 more than twice the score of Robert. What was Ramon's score if together they scored 36 points?

A. 11 pts. B. 13 pts. C. 23 pts. D. 25 pts.

__ 45. The area of a rectangular playground is120 sq .m and its perimeter is 46 m. What are the length and width of the playground?

A. 15 m. and 8 m. B. 30 m. and 4 m. C. 12 m. and 10 m. D. 20 m. and 6 m.

__46. The sum of two numbers is 12 and the product is 20. What are the numbers?

A. 4 and 5 B. 3 and 4 C. 2 and 6 D. 2 and 10

__ 47. Three- fourth of a number when added to thrice the number gives a result of 30. What is the number?

A. 15 B. 12 C. 8 D. 6

__ 48. Mario can paint a certain area of a house in 10 hours. Ben can paint the same area in 15 hours. How long would it take them, working together, to do the painting job?

A. 5 hrs. B. 6 hrs. C. 12.5 hrs. D. 25 hrs.

__ 49. Mr. Ong bought a piece of land in Tanay for P 275000. If it increases P 2000 in value every year, what will be its value at the end of 10 years?

A. P 293,000 B. P 291,000 C. P 289,000 D. P 287,000

__ 50. The table below shows the values of x and y, where x varies inversely with y.

X	-3	-2	n
Y	-4	M	3

What are the values of m and n, respectively?

A. 6 and -4 B. 5 and -2 C. -6 and 4 D. -5 and 2

APPENDIX E

TABLE OF SPECIFICATION
(Mathematics Achievement Test for Try Out)

TOPICS	Know-ledge	Compre-hension	Appli-cation	HA	Total
Linear Equation and Inequalities	1,2	4,6,7,8	3,5,53	-	9
Quadratic Equation	-	9,11,12,13	10,55,56,	14	8
Rational Algebraic Expression	-	15,16, 17,18,22 28	19,21,23,25 ,26, 27,29,54,57 ,58	20,24	18
Variation	-	30,31,32,33, 34	35	59,60	8
Integral Exponents	-	36, 37	-	0	2
Radical Expressions	-	-	38,39,40,41 ,42, 43,44	0	7
Searching for Patterns in Sequences, Arithmetic, Geometric and others	45,52	48	47,49	46,50,51	8
Total	**4**	**22**	**26**	**8**	**60**

CURRICULUM VITAE

CURRICULUM VITAE

Name	:	Joel R. Sintos
Date of Birth	:	October 25, 1978
Place of Birth	:	Bunu-anan, Catbalogan, Samar
Position	:	Teacher
Station	:	Guinsorongan Integrated School Catbalogan, Samar
Civil Status	:	Married

EDUCATIONAL BACKGROUND

Elementary	:	Bunu-anan Elementary School Bunu-anan, Catbalogan, Samar
Secondary	:	Samar National School Catbalogan, Samar
Tertiary	:	Bachelor of Secondary Education (BSE) Major in Mathematics Samar College Catbalogan, Samar
Graduate	:	Master of Arts in Teaching (MAT) Major in Mathematics Samar State University Catbalogan, Samar

TRAININGS/SEMINARS ATTENDED

2006 Regional Seminar on Property and Supply Management, March 27-28, 2006 at Regional Teachers Training Center (RTTC), DepEd RO8.

Division Seminar-Workshop on the Secondary Mathematics Curriculum, May 25-27, 2005 at Redaja Hall, DepEd, catbalogan, Samar.

Division Training of Teachers on Secondary Math IV, June 2-6, 2003 at Redaja Hall, DepEd, Catbalogan, Samar.

Division Seminar-Workshop on Basemath Game and Instructional Materials Construction, October 28, 2008 at Samar National School, Catbalogan, Samar.

The 2003 Annual Convention of the Mathematical Society of the Philippines, May 24-25, 2003 at University of the Philippines, Los Baños, Laguna.

Teacher-Training Workshop on TV-Assisted Instruction, August 30 – September 1, 2006 at Samar National School, Catbalogan, Samar.

Regional Training of Newly Hired DepEd Elementary and High School Mathematics Teachers, October 23-27, 2006 at Leyte Normal University, Tacloban City.

District Training on More Effective Assessment of Student Learning, November 13-14, 2003 at Catbalogan II Central Elementary School. Catbalogan, Samar.

Pandibisyon Seminar-Workshop sa "Makabagong Pananaw sa Pagmamasid at Pagpapabuti ng Pagtuturo ng Filipino sa Level na Sekondari Tuon sa Implementasyon ng BEC-Filipino", May 5-7, 2003, Samar National School, Catbalogan, Samar.

Certificate of Recognition as Coach during the 11th Philippine Mathematical Olympiad, Regional Eliminations, October 18, 2008 at Leyte Normal University, Tacloban City.

Certificate of Recognition as Coach of the First Place Winner in the Divisional Damath Competition specifically on "Damath the Signed Fractions", October 16, 2008 at the Samar National School Social Hall, Catbalogan, Samar.

Certificate of Recognition as Coach of the First Place Winner in the Divisional Damath Competition specifically on "Damath the Signed Integer", October 16, 2008 at the Samar National School Social Hall, Catbalogan, Samar.

ELIGIBILITY

Licensure Examination for Teachers (LET)
August 2001

Table 12 continued

Programs/ Projects/ Activities	Objectively Verifiable Indicators (MOV's)	Means of Verification (MOV's)	Time Frame												Person's Respon-sible	Amount and Services				
			J	F	M	A	M	J	J	A	S	O	N	D		LGU	PTCA	DepEd	Others	Total
B.1. Increased learners performance in NAT 3	Increased MPS in NAT 3 by 2% every year from 70.33% to 72.33% by March 2011; 72.33% to 74.33% by March 2012; 74.33% to 76.33% by March 2013; and 76.33% to 78.33% by March 2014.	NAT result													Teachers/ School Head					

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