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Correlates of Mathematics Performance of Sophomore Students of Integrated Public Schools in the Division Samar: Basis for Instructional Redirections

Joel R. Sintos
College of Arts and Sciences Samar State University
Corresponding Author: Joel R. Sintos

Abstract: *The study was a descriptive-correlational one that aimed at determining the correlates of the level of Mathematics performance of sophomore students of public integrated schools in the Division of Samar. The result of the study would serve as basis for instructional redirections. Moreover, the factors that were studied were categorized into three, namely, (a) students related-factors, (b) teacher-related factors and (c) home-related factors .The study involved all the eight Mathematics II teachers of the seven integrated public schools of the Division of Samar and 281 sophomore students and their parents of the public integrated schools, namely: Zumarraga IS, Cabungaan IS, Burgos IS, Tenani IS, Mualbual IS, Tominamos IS, and Guinsorongan IS. Using an "Achievement Test in Mathematics" developed by the researcher and "Questionnaire" for the three groups of respondents, 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. the study concluded that the Sophomore high school students, second year mathematics teachers and students home variates of Integrated schools in Samar Division possess common characteristics to sophomore students, teachers and students home variates of public Secondary Schools in Samar Division.Thus, series of recommendation were derived from the study to improve mathematics performance of secondyear students.*

Keywords*: Correlates,mathematicsperformance,Integrated,Integrated Schools, educational background, Home-related factors, teacher-related factors, students-related factors.*

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I. Introduction.

Mathematics is a core subject offered among pupils/students from primary up to tertiary level. It is one of the important skills in learning and universal language. Mathematics is a useful way to think about nature and phenomena of our world. 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 4th 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 2008-2009 and 2009-2010 showed the following: (a) for Guinsorongan Integrated School (GIS), the mean score for Mathematics in the NAT was 78.80 in SY 2008-2009 while for SY

2009-2010 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 2008-2009 while for SY 2009-2010 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 2008-2009 while for SY 2009-2010 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 2008-2009 while for SY 2009-2010 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 2008-2009 while for SY 2009-2010 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 2008-2009 while for SY 2009-2010 the mean score for Mathematics in the NAT was 73.16; (g) for Tenani Integrated School the mean score for Mathematics in the NAT was 77.63 in SY 2008-2009 while for SY 2000-2010 the mean score for Mathematics in the NAT was 61.10. Based from the 2008-2010 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 sophomore 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 2009-2010.

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?

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 gyrus. 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.

II. 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 have 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, and (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.

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.

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.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.

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.

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 seventy-five percent (75%) 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.

.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.

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.

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.

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.

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.

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.

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: 1) 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.

III. Methodology

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 1. 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 2 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 3 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 was 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 itsSilanga National High School.

The first administration of the test was done on Jan. 2010, and one week after, the second administration was made. After which, a computed correlation of .88 proved was obtained, the reliability of the instrument were fairly high, adequate for [ndividualmeasurements.s

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 2010 to further ascertain its reliability and 2 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 2010 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 2009-2010. 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.

Table 1: The Sampling Frame of the Study

	Teacher-Respondents			Student-Respondents		
Integrated Schools	Population	Computed sample	Actual Sample	Population	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
Tenane IS	1	1	1	44	17	35
Mualbual IS	1	1	1	59	23	32
Tuminamos IS	1	1	1	211	82	82
Guinsorongan	1	1	1	91	35	35
Total	8	8	8	629	245	281

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.

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 2nd 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 2nd 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 2010. It was March 04, 2010 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, 2010.

The gathering of data for Guinsorongan was last March 13, 2010 with the help of the adviser of the student. The data gathering for Cabungaan IS was March 16, 2010.

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 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 division. 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 conclude 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 the 2) factors affecting the level of mathematics performance, namely: student-related factors, teacher-related factors and home-related factors.

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

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.

IV. Summary Of Findings, Conclusions And Recommendations

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 P11,812.50, 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 rof 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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