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Factors Affecting the Performance of the Grade 9 Students in Learning Mathematics

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Abstract —Academic performance is one of the important goals of education and has always been influenced by number of factors including student factor, teacher factor, home factor, and school environment. This study evaluates the factors affecting the academic performance in Mathematics of the Grade 9 students of Dr. Geronimo B. Zaldivar Memorial School of Fisheries, Albuera, Leyte. The study employed descriptive correlational research. Fifty respondents were asked to answer a survey questionnaire to evaluate the factors affecting their performance in learning Mathematics. Their academic performances were assessed using their final grades in Math in their previous year. The assembled information was dealt with measurably utilizing simple percentage, weighted mean, and Pearson r. Results revealed a significant relationship between student factor and academic performance (weak positive relationship); teacher factor and academic performance (strong positive relationship); home factor and academic performance (weak positive relationship); and school factor and academic performance (strong positive relationship) of the Grade 9 students in Mathematics. Hence, a Mathematics performance improvement plan is highly recommended for adoption and evaluation.

Keywords — Factors, Performance, Grade 9 Students, Learning Mathematics

I. Introduction

In the field of education, there are various ways for students to cope faster in every subject such as taking notes by hand and use different study to help improve their skills on learning such things (NAWA, 2023). This is important since, in the whole world, many believe that the students are learning to have a better future and to have knowledge which suits for their dream and future careers. Therefore, education exposed the students to the new learnings and enhances their critical thinking skills by providing the learners the desired competencies and performances in every curriculum or subjects.

Mathematics is one of the subjects that holds such an important and unique place among other subjects because it provides an effective way of building mental discipline and encourages

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logical reasoning, mental rigor, and plays a crucial role in understanding the contents of other school subjects such as science, social studies, and even music and art (International Commission on Mathematical Instruction, 2023). In addition, many are aware that such problem-solving and computations in mathematics are always some of the important discussions which are needed to be learned and have long been an important aspect of mathematics (Liljiedahl et.al., 2016) to help the learners to prepare themselves during their individual careers' daily lives (Arizona.edu, 2023).

However, despite the promising feature in learning Mathematics, still many students have less interest and less performing in the subject. In fact, based on the report of the 2022 National Assessment of Educational Progress (NAEP) in Mathematics Assessment, the average eighth-grade mathematics score decreased by 8 points compared to 2019 and was lower than all previous assessment years going back to 2003; thus, considered as the largest score declines in NAEP mathematics since initial assessments in 1990 (The Nation's Report Card, 2022). Indeed, reasons could be due to the students' negative perception in learning Mathematics because they lack understanding and self-perception of the content knowledge (Aguilar, 2021), students have other priorities that compete for their time and attention and do not perceive the classroom climate as supportive (Carnegie Mellon University, 2023), and it seems that many students hate and fear Mathematics because of computation (Asana, 2021).

According to Effandi and Normah cited in Landicho (2021), students' attitudes towards mathematics are very much related to their attitude towards problem solving in general. The researchers added that negative attitudes need to be overcome, so that later in life, students will not suffer from poor problem-solving skill since these are essentials for dealing competently on their daily life.

In the community where the researcher relates to, the above factors are also observed and might be the reason why the learners of Dr. Geronimo B. Zaldivar Memorial School of Fisheries (DGBZMSF), Albuera, Leyte have obtained the Mean Percentage Scores (MSP), in Mathematics, ranging from 50 to 65 which is considered very low. This MPS suggests that the learning outcome of the learner was not performing and/or the curriculum and instruction was not that effective.

Therefore, this motivates the researcher to conduct a study in relation to the performance of students in learning Mathematics. The present study aims to explore reasons or factor(s) which affects the student's academic performance in the field of Mathematics. This study aims to measure the statistical percentage of the participants who has been affected by the factors. Additionally, the research findings will be projected to help the researcher create an improvement plan that will enhance the performance of students in learning Mathematics. By doing so, this study can contribute to the on-going efforts to improve the quality of teaching and learning process.

This study evaluates the factors affecting the performance of Grade 9 students in learning Mathematics, of Dr. Geronimo B. Zaldivar Memorial School of Fisheries, Albuera North District, Leyte DIvision. The findings of the study were the basis for the proposed improvement plan.

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Specifically, this study sought to answer the following questions:

1. What is the extent of factors affecting the performance of Grade 9 students in Mathematics in terms of:
   1.1 Student related;
   1.2 Teacher related;
   1.3 Home related; and
   1.4 School related?
2. What is the performance of Grade 9 students in Mathematics in previous year?
3. Is there a significant relationship between the performance of Grade 9 students in Mathematics in previous year and extent of factors affecting the performance of Grade 9 students in Mathematics in terms of:
   3.1 Student related;
   3.2 Teacher related;
   3.3 Home related; and
   3.4 School related?
4. What improvement plan can be proposed based on the findings of this study?

II. Methodology

Design. This study utilized a descriptive-correlational design employing the quantitative approach to evaluate the factors affecting the performance of Grade 9 students in learning mathematics for School Year 2023-2024. Dr. Geronimo B. Zaldivar Memorial School of Fisheries, Albuera North District, Leyte Division is the main locale of the study. The 50 Grade 9 students enrolled in the said locale for School Year 2023-2024 are the main respondents of the study. A modified survey questionnaire was used in the study to collect the desired data. This research focused on evaluating the factors affecting the performance of Grade 9 students in learning mathematics through simple percentage, weighted mean, and its significant difference. A Proposed Improvement Plan based on the findings of the study is the output.

Sampling. There are 50 Grade 9 students involved in this study. The research instruments were administered face-to-face with consent from the respondents and approval from Schools Division Superintendent, Public School District Supervisor, and School Principal.

Research Procedure. The researcher prepared the research design and tools utilized in the study. Approval and recommendation from the Panel of Examiner of the Graduate Studies was sought. A letter request to conduct this study was forwarded to the Office of the Schools Division Superintendent. Upon approval, permission from the District Supervisor and School Head was secured before the actual gathering of data. Orientation of the participants and administration of the survey questionnaire was done face-to-face after the approval of the permit from the respondents. The respondents were given ample time to answer the survey questionnaire. Results

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of the tests were collected. Data were tallied and submitted for statistical treatment, analysis and Interpretation of Data. Making of Proposed Improvement Plan followed.

Ethical Issues. The researcher properly secured the permission to conduct the study from the authorities through written communication. In the formulation of the intervention materials that was used in the study, the use of offensive, discriminatory or other unacceptable language was avoided. The respondents' names and other personal data were not included in this study to protect their privacy. Participation of the respondents was also voluntary. Letter of Consent to the respondents was provided. The researcher maintained objectivity in analyzing and discussing the results. All authors whose works were mentioned in this study were properly quoted and were acknowledged in the reference.

Treatment of Data. Weighted Mean was employed to determine the extent of factors affecting and performance of Grade 9 students in Math. Simple Percentage was used to determine the academic performance of Grade 9 students. Pearson-Product Moment Correlation was used to determine the significant relationship between the extent of factors affecting and performance of Grade 9 students in Mathematics.

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III. Results and Discussion

Table 1
Extent of Factors Affecting Learners' Performance in terms of Student Factor

STATEMENTS	Weighted Mean	Description	Interpretation
A. INTEREST			
1. I make myself prepared for the math subject.	3.74	Often	High
2. I listen attentively to the lecture of my math teacher.	4.14	Often	High
3. I actively participate on classes' discussion, answering exercises and/or clarifying things I did not understand.	2.96	Sometimes	Average
4. I want to get good grades in test, quizzes, written works, and performance.	4.42	Always	Very High
5. I get frustrated when the discussion is interrupt or the teacher is absent.	2.76	Sometimes	Average
AVERAGE	**3.60**	**Often**	**High**
B. STUDY HABIT			
1. I do my assignments regularly.	4.34	Always	Very High
2. I exert more effort when I do difficult assignments.	3.74	Often	High
3. I spend my vacant time in doing my assignments or studying my lessons.	3.22	Sometimes	Average
4. I study the lessons I missed if I was absent from the class.	3.48	Often	High
5. I spend less time with my friends during school days to concentrate more on my studies.	3.22	Sometimes	Average
AVERAGE	**3.60**	**Often**	**High**
Weighted Mean	**3.60**	**Often**	**High**

Legend:

RANGES	*DESCRIPTION*	*INTERPRETATION*
4.21-5.00	*Always*	*Very High*
3.41-4.20	*Often*	*High*
2.61-3.40	*Sometimes*	*Average*
1.81-2.60	*Seldom*	*Low*
1.00-1.80	*Never*	*Very Low*

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Table 1 presents the extent of factors affecting learners' performance in Mathematics in terms of student factor which are Interest and study habit. On interest among students in mathematics, it can be noticed that the interest of the students is to always get good grades in test, quizzes, written works, and performance which obtained an average weighted mean of 4.42 and followed by listening attentively to the lecture of their math teacher with a weighted mean of 4.14. Moreover, the average mean of learner's interest in the subject is 3.60 which is high. This means that students' interest in learning Math is high. This suggests that the students were interested and motivated to learn the subject to get good grades in tests, quizzes, written works, and performance. Borderless Charity, Inc (2017) suggested that motivation affects how an individual pays attention to specific information and attempts to understand the learning materials through experiences, thoughts, ideas, and senses rather than just going through the process of rote learning. This means that interest is a very important factor to achieve academic performance in Mathematics.

On the other hand, results revealed that students always do their assignments regularly with an average weighted mean of 4.34 and often exert more effort when they do difficult assignments with an average weighted mean of 3.74. This implies that they are practicing good study habits and have a positive attitude towards General Mathematics to improve their performance. It was revealed on the table that the extent of student's factors in learning Mathematics in terms of study habits has an average mean of 3.60 which is high. According to Landicho (2021), positive attitude towards mathematics and proper good habits will highly contribute to improve the academic performance in mathematics. Hence, students' attitude towards mathematics is very much related to their attitude towards problem solving in general (Effandi and Normah, 2009).

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Table 2
Extent of Factors Affecting Learners' Performance in terms of Teacher Factor

STATEMENTS	Weighted Mean	Description	Interpretation
A. PERSONALITY TRAITS			
1. Has a good relationship to students and teachers.	4.64	Always	Very High
2. Show smartness, confidence, and firmness in making decisions.	4.82	Always	Very High
3. Imposes proper discipline and is not lenient in following the prescribed rules.	4.52	Always	Very High
4. Has an appealing personality with good sense of humor.	4.78	Always	Very High
5. Is open to suggestions and opinions and is worthy of praise.	4.68	Always	Very High
AVERAGE	**4.69**	**Always**	**Very High**
B. TEACHING SKILLS			
1. Explains the objectives of the lesson clearly at the start of each period.	4.72	Always	Very High
2. Has the mastery of the subject matter.	4.70	Always	Very High
3. Is organized in presenting subject matters by systematically following course outline.	4.72	Always	Very High
4. Is updated with present trends, relevant to the subject matter.	4.36	Always	Very High
5. Uses various strategies, teaching aids/devices and techniques in presenting the lessons.	4.00	Often	High
AVERAGE	**4.50**	**Always**	**Very High**
Weighted Mean	**4.60**	**Always**	**Very High**

Legend:

RANGES	*DESCRIPTION*	*INTERPRETATION*
4.21-5.00	*Always*	*Very High*
3.41-4.20	*Often*	*High*
2.61-3.40	*Sometimes*	*Average*
1.81-2.60	*Seldom*	*Low*
1.00-1.80	*Never*	*Very Low*

Table 2 presents the extent of factors affecting learners' performance in terms of teachers' factor which are Personality Traits and Teaching Skills. On teacher's personality traits,

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it can be noticed that the teacher always shows smartness, confidence, and firmness in making decisions, always has as an appealing personality with good sense of humor, always open to suggestions and opinions and is worthy of praise, has always good relationship to students, and always imposes proper discipline and is not lenient in following the prescribed rules, with an average weighted mean of 4.82, 4.78, 4.68, 4.62, and 4.52, respectively. Moreover, the average mean of teacher's personality traits is 4.69 which is very high. This suggests that the teachers are approachable, responsive, and behave in a way that motivates students to learn mathematics. Teachers' behaviors influence their students both in the classroom and in the community where students live. It is believed that the desirable ethics, such as integrity can improve academic and moral performance in students (Kawaruma, cited in Ukobizaba et.al, 2020). This means that personality traits of a teacher are very important factors to achieve academic performance in Mathematics.

Furthermore, results revealed that teachers always explain the objectives of the lesson clearly at the start of each period and always organized in presenting subject matters by systematically following course outline with an average weighted mean of 4.72. Also, teacher's teaching skills has always the mastery of the subject matter, and always updated with present trends relevant to the subject matter, with a weighted mean of 4.70 and 4.36, respectively. Oftentimes, teacher uses various strategies, teaching aids/devices and techniques in presenting the lessons with a weighted mean of 4.00. This means that teacher's teaching skills attract the students' interest through their behaviors, using new strategies that they can relate, and by presenting a challenge or problem for learners to solve. It was also revealed on the table that the extent of teacher's facto in learning mathematics in terms of teaching skills has an average mean of 4.50 which is very high. This also suggests the importance of the teacher-student relationship in teaching-learning process. According to Rita Pierson (n.d.), "kids don't learn from people they don't like." This means that learner's performance could be affected on how teachers motivate the learners and ensure the continuity of the motivation during the instruction. Also, it has been proved that teachers have an important influence on students' academic achievement (Korir & Kipkemboi, 2014). They play a crucial role in educational attainment because the teacher is ultimately responsible for translating policy into action and principles based on practice during interaction with the students (Afe, 2001). In their study, Wright, Horn and Sanders cited in Korir & Kipkemboi (2014) conclude that the most important factor influencing student learning is the teacher.

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Table 3
Extent of Factors Affecting Learners' Performance in terms of Home Factor

STATEMENTS	Weighted Mean	Description	Interpretation
A. HOME FACILITIES			
1. I have a separate room in my home for studies.	2.70	Sometimes	Average
2. I enjoy a proper hygienic meal on time.	4.20	Often	High
3. I am provided with all basic needs at my home.	3.44	Often	High
4. I can ask my parents and/or siblings for ideas when needed.	3.22	Sometimes	Average
5. My parents provide me most of the recommended textbooks in learning Mathematics.	2.38	Seldom	Low
AVERAGE	**3.19**	**Sometimes**	**Average**
B. MOTIVATIONAL BEHAVIOR OF PARENTS			
1. My parents' positive remarks stimulate my urge in learning mathematics.	3.92	Often	High
2. My parents' reward uplifts my interest in learning mathematics.	2.92	Sometimes	Average
3. My parents' physical involvement in my studies motivates me for more achievement.	3.66	Often	High
4. My parents check my homework daily.	2.18	Seldom	Low
5. My parents advise me friendly on my mistakes.	3.52	Often	High
AVERAGE	**3.24**	**Sometimes**	**Average**
Weighted Mean	**3.22**	**Sometimes**	**Average**

Legend:

RANGES	*DESCRIPTION*	*INTERPRETATION*
4.21-5.00	*Always*	*Very High*
3.41-4.20	*Often*	*High*
2.61-3.40	*Sometimes*	*Average*
1.81-2.60	*Seldom*	*Low*
1.00-1.80	*Never*	*Very Low*

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Table 3 presents the extent of factors affecting learners' performance in terms of home factor on Home Facilities and Motivational Behavior of Parents. On Home Facilities, it is revealed that students often enjoyed a proper hygienic meal on time with an average weighted mean of 4.20. Also, respondents are often provided with all basic needs at their home, with an average weighted mean of 3.44. Sometimes, the respondents can ask their parents and/or siblings for ideas when needed and have a separate room in their home for studies, with an average weighted mean of 3.22 and 2.70, respectively. Seldom, their parents provide them most of the recommended textbooks in learning Mathematics, with an average weighted mean of 2.38. This suggests that a conducive home environment with resources like books, a quiet space for studying, access to technology, and parental or siblings support can enhance learning and academic achievement. On the other hand, a lack of these facilities may hinder a learner's ability to focus and excel in their studies. Moreover, the average mean of home facilities is 3.19 which is average. This means that a student's academic performance cannot separate from home atmosphere in which children lives in well home environment. Vamadevappa (2005) said it is positive and substantial relationship among parents' involvement and educational achievements. Education has one of the vital tasks to guide young people to become a valuable member in society and the training informally starts at home. The home is the first school for children they enter to learn after birth, contributing the most crucial part in developing a child's personality (Younas et al., 2021).

In terms of Parents' Motivational Behavior, often parents' positive remarks stimulate students urge in learning mathematics with an average weighted mean of 3.99. Often, parents' physical involvement in their studies motivates them for more achievement, and parents advise them friendly on their mistakes, with an average weighted mean of 3.66 and 3.52, respectively. Sometimes, the respondent's parents' reward uplifts their interest in learning mathematics, with an average weighted mean of 2.92. Seldom, parents check their homework daily. This suggests that positive encouragement, interest in a child's education, setting high expectations, providing emotional support, and celebrating achievements can boost a child's motivation and determination. Moreover, the average mean of motivational behavior of parents is 3.24 which is average. This means that a lack of parental involvement or negative attitudes can demotivate and adversely affect a learner's performance and overall attitude towards learning. Crawford & Zygouris-Coe cited in Younas et al. (2021) argue that the home environment is very important element for student success than anything else. The encouragement to students from environment can promotes learning and boosts their capabilities, while discouragement from environment only depress the abilities of students.

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Table 4
Extent of Factors Affecting Learners' Performance in terms of School Factor

STATEMENTS	Weighted Mean	Description	Interpretation
A. SCHOOL ENVIRONMENT			
1. Appropriate facilities.	4.30	Always	Very High
2. Well-managed classrooms.	3.84	Often	High
3. Available school-based health supports.	4.08	Often	High
4. Fair disciplinary policy.	3.66	Often	High
5. Available library references.	3.02	Sometimes	Average
AVERAGE	**3.78**	**Often**	**High**
B. CLASSROOM ENVIRONMENT			
1. The classroom is fitted with the latest technology.	4.06	Often	High
2. The classroom has enough space for the number of students enrolled.	2.44	Seldom	Low
3. The seats in the classroom are comfortable.	3.48	Often	High
4. The lighting in the classroom is appropriate during audio/visual presentations.	4.06	Often	High
5. The time schedule is followed.	3.84	Often	High
AVERAGE	**3.60**	**Often**	**High**
Weighted Mean	**3.68**	**Often**	**High**

Legend:

RANGES	*DESCRIPTION*	*INTERPRETATION*
4.21-5.00	*Always*	*Very High*
3.41-4.20	*Often*	*High*
2.61-3.40	*Sometimes*	*Average*
1.81-2.60	*Seldom*	*Low*
1.00-1.80	*Never*	*Very Low*

Table 4 presents the extent of factors affecting learners' performance in terms of school factor in terms of School Environment and Classroom Environment. Results showed that School Environment has always appropriate facilities with an average weighted mean of 4.30. Often, the school environment had available school-based health supports, well-managed classrooms, and fair disciplinary policy, with and average weighted mean of 4.08, 3.84, and 3.66, respectively.

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Sometimes, the school environment had available library references with an average weighted mean of 3.02. This suggests that having appropriate facilities, well-managed classrooms, available school-based health supports, fair disciplinary policies, and accessible library references can contribute to a conducive learning environment, fostering focus, engagement, and overall academic success for students. Moreover, the average mean of school environment is 3.78 which high. This means that well organized classrooms and a supportive disciplinary approach can create a sense of structure and safety, while health support and library resources enhance a student's well-being and access to valuable educational materials. According to Korir & Kipkemboi (2014), a student outcome and academic success is greatly influenced by the type of school they attend.

In terms of Classroom Environment, often the classroom is fitted with the latest technology, the lighting in the classroom is appropriate during audio/visual presentations, the time schedule is followed, and the seats in the classroom are comfortable, with an average weighted average of 4.06, 4.06, 3.84, and 3.48, respectively. Seldom, the classroom has enough space for the number of students enrolled, with an average weighted mean of 2.44. Moreover, the average mean of classroom environment is 3.60 which is high. This suggests that having appropriate facilities, well-managed classrooms, available school-based health supports, fair disciplinary policies, and accessible library references can contribute to a conducive learning environment, fostering focus, engagement, and overall academic success for students. Well organized classrooms and a supportive disciplinary approach can create a sense of structure and safety, while health support and library resources enhance a student's well-being and access to valuable educational materials. According to Suleman et.al cited in Ezike (2018), classroom environment can affect students' comfort and their ability to learn. Students who are comfortable are likely to get much information compared to those who are uncomfortable (Ezike, 2018).

Table 5
Academic Performance of Grade 9 Students

RANGE	DESCRIPTOR	ACADEMIC PERFORMANCE OF GRADE 9 STUDENTS	
		FREQUENCY	%
90-100	OUTSTANDING	16	32
85-89	VERY SATISFACTORY	15	30
80-84	SATISFACTORY	12	24
75-79	FAIRLY SATISFACTORY	7	14
BELOW 75	DID NOT MEET EXPECTATION	0	0
TOTAL		50	100
AVERAGE		**83.16**	**SATISFACTORY**

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Table 5 presents the academic performance of Grade 9 students for their previous year. It can be seen from the table that majority of the respondents had 90-100 comprising of 16 or 32 percent of the total sample, followed by 15 students with 85-89 garnering a percentage of 30 percent. Then 12 respondents or 24 percent of the total sample had an academic performance of 80-84 while 7 respondents or 14 percent got the academic performance of 75-79. This implies that most of the students in grade nine obtained an outstanding academic performance. Dedicated study habits, effective teaching, strong motivation, supportive environment, or a combination of these could contribute to the outstanding academic performance of the students. According to Landicho (2021), positive attitude towards mathematics and proper good habits will highly contribute to improve the academic performance in mathematics. Also, it has been proved that teachers have an important influence on students' academic achievement (Korir & Kipkemboi, 2014). They play a crucial role in educational attainment because the teacher is ultimately responsible for translating policy into action and principles based on practice during interaction with the students (Afe, 2001). In their study, Wright, Horn and Sanders cited in Korir & Kipkemboi (2014) conclude that the most important factor influencing student learning is the teacher.

Furthermore, the home is the first school for children they enter to learn after birth, contributing the most crucial part in developing a child's personality. Genuinely, the home environment impacts children viably by several means, such as the first-hand experience of seeing parents, older siblings, and other members of the family (Younas et al., 2021). Well-organized classrooms and a supportive disciplinary approach can create a sense of structure and safety, while health support and library resources enhance a student's well-being and access to valuable educational materials. According to Korir & Kipkemboi (2014), a student outcome and academic success is greatly influenced by the type of school they attend.

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Table 6
Test of Relationship

Variables Correlated	r	Computed value or t	Table Value @.05	Decision on Ho	Interpretation
STUDENT FACTOR AND ACADEMIC PERFORMANCE	0.46	1.461	1.221	Reject Ho	Significant Relationship *(Weak Positive Relationship)*
TEACHER FACTOR AND ACADEMIC PERFORMANCE	0.67	2.382	1.221	Reject Ho	Significant Relationship *(Strong Positive Relationship)*
HOME FACTOR AND ACADEMIC PERFORMANCE	0.39	1.382	1.221	Reject Ho	Significant Relationship *(Weak Positive Relationship)*
SCHOOL FACTOR AND ACADEMIC PERFORMANCE	0.64	2.367	1.221	Reject Ho	Significant Relationship *(Strong Positive Relationship)*

Table 6 presents the test of relationship between the extent of factors affecting the Grade 9 students' performance and their academic performance in Mathematics. It was revealed on the table that there were significant relationships between all the areas of factors affecting the Grade 9 students' performance and their academic performance in Mathematics. As to the student factor, there is a weak positive relationship between the student factor and the academic performance of the respondents with the computed t-value of 1.461 which is greater than the tabular value of 1.221 at 0.05 level of significance so null hypothesis is rejected. This means that there is a significant relationship between the student factor and academic performance of the respondents. The r value of 0.46 has resulted to weak positive relationship. This implies that there is a discernible but not strong connection between student's interests and study habits in learning mathematics which resulted to a positive academic performance of the students.

It was also revealed on the table that there is a strong positive relationship between the teacher factor and the academic performance of the respondents with the computed t-value of 2.382 which is greater than the tabular value of 1.221 at 0.05 level of significance so null hypothesis is rejected. This means that there is a significant relationship between the teacher factor and academic performance of the respondents. The r value of 0.67 has resulted to strong positive relationship. This implies that there is an observable with strong connection between teacher's personality traits

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and teaching skills in mathematics which resulted to a positive academic performance of the students.

Moreover, table 6 revealed that there is a weak positive relationship between the home factor and the academic performance of the respondents with the computed t-value of 1.382 which is greater than the tabular value of 1.221 at 0.05 level of significance so null hypothesis is rejected. This means that there is a significant relationship between the home factor and academic performance of the respondents. The r value of 0.39 has resulted to weak positive relationship. This implies that there is a noticeable but not strong connection between home facilities and motivational behavior of parents which resulted to a positive academic performance of the students.

Finally, the table presents the test of relationship between the extent of factors affecting the Grade 9 students' performance and their academic performance in Mathematics which revealed that there is a strong positive relationship between the school factor and the academic performance of the respondents with the computed t-value of 2.367 which is greater than the tabular value of 1.221 at 0.05 level of significance, so null hypothesis is rejected. This means that there is a significant relationship between the school factor and academic performance of the respondents. The r value of 0.64 has resulted to strong positive relationship. This implies that there is an observable with strong connection between school environment and classroom environment in learning mathematics which resulted to a positive academic performance of the students.

IV. Conclusion

The study revealed a significant relationship between student factor and academic performance, teacher factor and academic performance, home factor and academic performance and school factor and academic performance. The Grade 9 students' performance in Math is affected with these factors. Thus, teachers must create an environment which is conducive to teaching and learning, strategies and approaches in teaching the subject and activities must be suited to the needs and capability of the students to attain positive learning outcomes.

In accordance with the findings and result of the study, an Improvement Plan was created to enhance the performance of students in learning Mathematics.

V. Recommendations

1. The proposed mathematics performance improvement plan, which is geared towards addressing issues identified in this study, be highly recommended for adoption and evaluation.

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2. Students must actively participate on classes' discussion, answering exercises and/or clarifying things they did not understand and not be upset when the discussion is interrupted or the teacher is absent.
3. Encourage students to spend their vacant time in doing assignments or studying their lessons and spend less time with their friends during school days to concentrate more on their studies.
4. Teachers should use various strategies, teaching aids/devices and techniques in presenting the lessons. Hand-outs and worksheets can also be prepared from time to time to lessen the time of taking notes and maximize the time of teaching- learning.
5. Parents must provide their students most of the recommended textbooks in learning Mathematics and check their homework daily.
6. Schools should have an available library references and the classroom must have enough space for the number of students enrolled.
7. School administrators should consider the findings of the study to plan and design quality developments for improving the performance of the students in learning Mathematics.
8. Future researchers should enhance this study to further assess and examine the relationship between student factor and academic performance, teacher factor and academic performance, home factor and academic performance, and school factor and academic performance.
9. Future researchers should replicate this study to include different locales and include different variables aside from the mentioned in this study.

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