Original Research Article

Factors Associated with Mathematics Performance

ABSTRACT

Aims: The purpose of this study is to identify the factors associated with the academic performance of Grade 10 students during their First Quarter of school as well as the significant correlation between the factors and student academic performance in Mathematics.
Study design: Descriptive Correlation Design
Place and Duration of Study: The study was conducted at Agusan National High School in Cagayan de Or City's East 1 District during the school year: 2022
Methodology: The respondents were Two hundred thirty-one (231) students in Grade 10 at Agusan National High School in Cagayan de Oro City's East 1 District. This study used a researcher-made questionnaire that underwent validity and reliability testing and the academic performance of the students.
Results: The results showed that students agree with routines related to mastering Mathematics at a high level. Furthermore, there is no correlation between student study habits and Mathematics performance in terms of self-confidence, but there is a substantial positive association between the student's study habits and performance in terms of attitude. The study habits and learning techniques used by students were found to be important determinants of how well they performed in Mathematics. The researcher strongly suggested using the enhancement plan in teaching Mathematics to Junior High school students.
Conclusion: Students have a very positive attitude toward their study habits when learning Mathematics. Students felt that studying and learning Mathematics was essential. Students' success and academic growth depend heavily on their Mathematics performance.it is essential for pupils to master and comprehend its concepts. Students' study habits in terms of attitudes have an impact on how they learn Mathematics.

Keywords: Attitudes, Learning Strategies, Math Performance, Study habits

1. INTRODUCTION

In the modern world, Mathematics is used in a variety of contexts, including the economy of a nation, building construction, marking, and appraisal of people. It is accurate to claim that Mathematics has played a significant role in establishing the fast-paced lifestyle with all of its comforts and pleasures. One could no survive in the REAL world without Mathematics. It is applied to buy the things we want, measure, tell the time, and so forth. The foundation in Mathematics is important from simple to more complex topics like Geometry, Algebra, and the metric system. One could not survive in the real world without Mathematics.

Despite its importance and contributions, many students claim that they detest Mathematics and that it is a pointless, boring, and even difficult subject. No wonder Filipino students rank Mathematics as one of the most challenging academic disciplines. Countries continually pay attention to students' Mathematical ability since it is regarded as the primary topic that is important for expansion and development (Capuno et., a 2019).

Comment [BRW1]:
1.The paper lacks a clear research question and a specific research methodology that can address the identified challenges. It would have been beneficial to have a specific research question that can guide the investigation, such as "What are the factors that contribute to the negative attitude of Filipino students towards Mathematics, and how can these factors be addressed to improve their performance?"

2.The paper does not provide a comprehensive review of the existing literature related to the challenges faced by Filipino students in Mathematics education. A detailed review of the existing literature could have helped identify the research gaps and guide the research question.

Moreover, Dangle et al. (2020), in their study on “The Implementation of Modular Distance Learning in the Philippine Secondary Public Schools,” most of the students have difficulty solving. Problem-Solving does not only include and require computation, but there is a need to understand and analyze the problem. It is important that students comprehend the problems.

Mathematics, in particular, is commonly seen to be difficult, perplexing, and unappealing to certain people. Mathematics has a stigma attached to it, and those who excel at it are frequently viewed as though they are entirely normal. Beyond the application of fundamental numeracy abilities, Mathematics is important. It is also the best way to help students improve their logical reasoning and higher-order cognitive abilities. In this regard, fostering a good attitude toward Mathematics among students is a key objective in Mathematics education.

In general, Filipino students thrive in acquiring knowledge but struggle in subjects that require higher-order thinking skills. The Filipino students' performance in Mathematics needs to be improved as reflected in the 2017-18 Global Competitiveness Report, wherein the Philippines ranked 79th out of the 138 participating countries in terms of quality Science and Mathematics education (Schwab, 2018).

So, Mathematics is challenging for students. This might be about the attitude of the students toward this subject or maybe on the strategies in learning Mathematics that are affecting their academic performance. These are just a few of the questions that tickled and inspired the mind of the researcher to conduct an investigation and gather data that can aid the need for explanations on these continuing adversaries.

Attitudes and the affective domain are important for students learning Mathematics. The Mathematics teachers' plan for their instructional activities may be influenced by their investigation of how the pupils view Mathematics. Teachers have a significant impact on how students think and behave.

However, contrasting results on this matter have shown wherein Singh et al. (2021) revealed an unforeseen outcome that showed that the connection between interest and Mathematics execution was inconsequential. The investigation embraced interest and self-viability as the persuasive factors and inferred that educators' passion helped affect Grade 7 students' interest in Mathematics subject.

Meanwhile, Mazana et al. (2019) stated that a number of factors, such as students' attitudes and confidence toward the subject, teachers' instructional practices, and school environment, have an impact on students' learning and performance in Mathematics. Student attitudes and how much they like Mathematics greatly predicted how well they would succeed.

Comment [BRW2]: These two paragraphs cited two previous studies, but, unfortunately, they do not provide any information about the methods and results of the study.

Consider summarizing the key findings of the study in a sentence or two to give readers an idea of what the studies were about.

Another consideration of challenges towards Mathematics performance is the student’s strategies in studying the subject. These strategies may include reading as well as think-pair and share. Just like reading literature, one should also learn to read Mathematics because it has its own unique reading protocol. Similar to how they learn to read a book or a poem, listen to music, or look at a painting, students need to learn how to read Mathematics.

Meanwhile, students use the collaborative learning approach known as think-pair-share (TPS) to work together to solve a problem or respond to a question regarding a given reading. Students must think independently about a subject or respond to a question; and share ideas with classmates as part of this method. Partner discussions increase engagement, concentrate attention, and get pupils interested in understanding the reading material (Shanahan, 2020).

The subjects of English and Mathematics are particularly difficult for many high school students when it comes to communicating in English and giving answers or explanations in Mathematics. Students with minimal writing experience will struggle to communicate their views. As a result, when the teacher asks the class to write or perform TPS, the students struggle (Tuananay, 2019).

It is the objective of the study to determine the factors in terms of study habits and strategies associated with the Mathematics Performance of the students in New Normal Education. Moreover, it will provide data and information that can be utilized in the hope of minimizing negative impressions towards Mathematics.

The behaviorist theories of Pavlov serve as the foundation for this investigation. The focus of behaviorism is on making observations and responding to specific repetitive behaviors that may be evaluated and then subjected to analysis. Additionally, it places more emphasis on the understandable and concrete nature of

responses. In general, if one cannot observe it, it cannot be researched. Ivan Pavlov, who became well-known for his studies of stimulus and reaction, is frequently credited with the invention of behaviorism (McLeod, 2017).
Following Pavlov's research, John B. Watson considered it to be a subfield of Natural Science. Watson is largely recognized as having coined the word behaviorism and being one of Pavlov's most important supporters. Other significant figures associated with behaviorism are B.F. Skinner and Edward Thorndike. Skinner is mainly well known because he introduced the concept of operant conditioning, which emphasized the use of both reinforcements to help individuals learn new behaviors or ideas.

Meanwhile the concept of this study specifically on Mathematics performance is in connection with DepEd Order (DO) No. 8, s. 2015 entitled, "Policy Guidelines on Classroom Assessment for the K to 12 Basic Education Program" where there are three major components in giving grades to the students. It consists of Written Works, Performance Tasks, and Quarterly Assessments. Every subject has a different weight of percent in each component. As stated in DepEd Order (DO) No. 8, s. 2015, assessment should be used to inform and improve classroom practices and promote learning outcomes.

In connection with that, to evaluate students learning at points in each quarter, the summative assessment shall continue in the form of written works and performance tasks. Written works shall be administered to assess essential knowledge and understanding through quizzes and long/ unit tests. Items should be distributed across the cognitive process dimensions (DepEd Order No. 8, s. 2015). On the other hand, performance tasks refer to assessment tasks that allow learners to show what they know and are able to do in diverse ways. For example, they may create or innovate products or do performance-based tasks, including skill demonstrations, group presentations, oral work, multimedia presentations, and research projects. It is important to note that written outputs may also be considered performance tasks (DepEd Order No. 8, s. 2015).

The independent variable of this study is students' study habits in terms of attitudes, self-confidence, and learning strategies in learning Mathematics. The dependent variable of this study is the students' Mathematics performance based on their First Quarter grades in Mathematics for School Year 2022

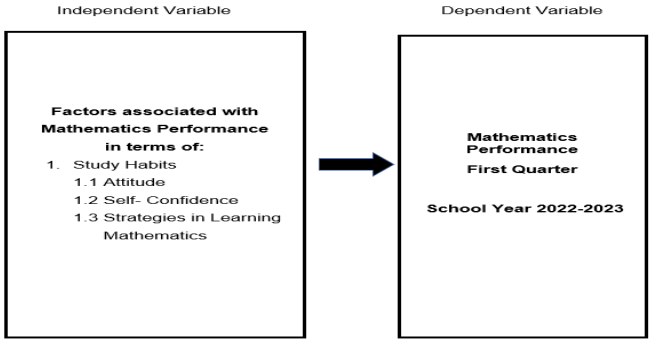

Figure 1.
Schematic Diagram showing the relationship between the Independent and Dependent Variables of the study.

2. MATERIAL AND METHODS 1.

2.1 Design

This study used quantitative research utilizing the descriptive correlation design because it involves respondents, analysis, and interpretation of data to be gathered. This study involves the interpretation of numerical data and focuses on testing theories and hypotheses in which variables are controlled and manipulated. The researcher finds it to be best and appropriate to assess the significant relationships in the Factors Associated with the Mathematics Performance of Junior High School students at Agusan National High School.

Comment [BRW3]: 1. The paper does not provide information about the validity and reliability of instruments.

2. The paper does not provide any information about how the obtained data will be analyzed.

Quantitative research describes a research problem through a description of trends or a need for an explanation of the relationship among variables. The overall structure for a quantitative design is based on the scientific method. It uses deductive reasoning, where the researcher forms a hypothesis, collects data in an investigation of the problem, and then uses the data from the investigation, after analysis is made and conclusions are shared, to prove whether the null hypothesis is accepted or rejected (Namocatcat, 2022). In quantitative research, the data and/or information are usually gathered using structured research instruments. The results of the data gathering are based on a larger sample population. The research study can usually be replicated, given its high reliability.

2.2 Respondents and Sampling Procedure

The respondents of this study were the selected Grade 10 Junior High School students at Agusan National High School enrolled for the School Year 2022 – 2023. From the total of five hundred fifty (550), Slovin's Formula was used to determine the number of actual respondents to the study, which is two hundred thirty-one (231). Below is the table presenting the total number of students in the Grade 10 level and the actual respondent sample.

Since the study was conducted in a school with a large number of enrolments, the researcher utilized a simple random sampling method. This method is defined as choosing a portion of a population at random. Each person in the population has an exactly equal probability of getting chosen using this sampling technique. The names of all the Grade 10 potential respondents were placed in a bowl, and the researcher randomly picked the two hundred thirty-one names of students that took part as the sample of actual respondents of this study. For privacy, the names of the students were then replaced with numbers and their responses were carefully kept to avoid the exposure of their identity.

2.3 Instrument

The study utilized a researcher-made survey questionnaire. The instrument was composed of two (2) major components. The first component was on the Study Habits with thirty-six (36) indicators, of which ten (10) indicators on Attitude, ten (10) for Self-confidence, and sixteen (16) indicators for learning strategies in Mathematics. Finally, the second part is on students' Mathematics Performance which was the grades they obtained during the First Quarter of the School Year 2022-2023.

3. RESULTS AND DISCUSSION

3.1 Factors Associated with Learning Mathematics

Comment [BRW4]: Before displaying the table, it is advisable to precede it with an introduction to help readers understand what table is being presented.

Table 1. *Students' Level of Study Habits on Attitude*

Attitude	Mean	SD	Description
1. I want to develop my Mathematical skills.	4.46	0.72	Strongly Agree
2. I get a great deal of satisfaction out of solving a Mathematics problem.	3.67	0.89	Agree
3. Mathematics helps develop the mind and teaches a person to think.	4.05	0.81	Agree
4. Mathematics does not scare me at all.	3.04	0.97	Neutral
5. I have a lot of self-confidence when it comes to Mathematics.	3.11	0.88	Neutral
6. I am able to solve Mathematics problems without too much difficulty.	2.99	0.96	Neutral
7. I expect to do fairly well in any Mathematics class I take.	3.51	0.89	Agree
8. I feel a sense of insecurity when attempting Mathematics.	3.34	0.90	Neutral
9. I learn Mathematics easily.	3.10	0.85	Neutral
10. I am confident that I could learn advanced Mathematics.	3.41	0.89	Agree
Overall Mean	**3.47**	**0.88**	**Agree**

***Note*:** 4.20-5.00 Strongly Agree 3.40 - 4.19 Agree 2.60 - 3.39 Neutral 1.80 - 2.59 Disagree1.00 - 1.79 Strongly Disagree

Table 1 shows the students' Study Habits associated with learning Mathematics in terms of Attitude. It has an Overall Mean of 3.47, with SD=0.88, which is described as Agree and with an interpretation of High level. This means that the students were able to achieve the second-highest level of attitude toward study habits in Mathematics. This implies that the student's attitude on study habits in learning Mathematics is of high level. Students believe that learning Mathematics is important and so they need to study it and learn it. Human intellect and logic are fundamentally based on Mathematics, which is also essential to understand the outside world. Mathematics promotes logical thinking and mental rigor and is a useful method for developing mental discipline (Park, 2020). Additionally, comprehending Mathematics is essential for learning other academic disciplines like Physics, Social Studies, and even Music and Art.

In the same table, the highest indicator, *I want to develop my Mathematical skills*, with a Mean of 4.46 with SD=0.72, which is described as Strongly Agree and interpreted as a Very High Level. This means that the students have a very high attitude toward their study habits in learning Mathematics. Despite the fact that Mathematics is a challenging and difficult subject, the students showed a willingness to study and learn. This quality or mindset can be of great advantage in learning Mathematics. This is because it allows students to have positive thoughts about achieving their goals despite the fact that they will hurdle various challenges along the way.

When a person thinks positively, they will maintain a positive attitude in the face of stressful circumstances. Instead, then letting the crisis or setback consume the person, they would be able to look past it. Even though they may need to confront and deal with the drawbacks, that person knows they can overcome them. The person is aware that just because there is terrible news does not mean everything is awful or that nice things will never happen again (Waters, 2022). Instead of expecting the worst and leaping to negative conclusions, someone who thinks positively assumes that others have the best intentions and interprets others' behaviors more positively. Optimistic thinkers are able to envision positive outcomes.

Meanwhile, the lowest indicator, *I am able to solve Mathematics problems without too much difficult* got a Mean of 2.99, with SD=0.96, which is described as Neutral and interpreted as Moderate Level. This means that the students have challenges and struggles in learning Mathematics. Concepts in Mathematics are difficult and challenging, especially when the students are at a higher level of the curriculum. Under K to 12, the concepts are presented in a spiraling manner which means that as the grade level progresses, the more difficult and challenging the examples and exercises are. This can be frustrating and might lead to a negative attitude toward learning Mathematics if not properly supported and guided by the teachers (Oco, 2022). Thus, it is necessary to aid in the form of follow-up, remedial activities, and tutorials to let the students feel that they are not alone and that they can reach their goals and objectives.

Table 2.*Students' level of Study Habits on Self-Confidence*

Self-Confidence	Mean	SD	Description
1. When I hear the word Mathematics, I have a feeling of excitement.	3.40	0.91	Agree
2. I have usually enjoyed studying Mathematics in school.	3.73	0.88	Agree
3. Mathematics is fun and interesting.	3.81	0.87	Agree
4. I like to answer new problems in Mathematics.	3.40	0.87	Agree
5. I would prefer to do an assignment in Mathematics than to write an essay.	3.42	0.80	Agree
6. I really love Mathematics.	3.38	0.92	Agree
7. I enjoy Mathematics class more than any other class.	3.20	0.93	Neutral
8. Mathematics is a very fascinating subject.	3.43	0.82	Agree
9. I am willing to take more effort in Mathematics.	3.90	0.84	Agree
10. The problem activities in Mathematics interest me.	3.49	0.91	Agree
Overall Mean	**3.52**	**0.87**	**Agree**

Note : 4.20-5.00 Strongly Agree 3.40 - 4.19 Agree 2.60 - 3.39 Neutral 1.80 - 2.59 Disagree 1.00 - 1.79 Strongly Disagree

Table 2 exhibits the students Study Habits associated with learning Mathematics in terms of Self-Confidence. It has an Overall Mean of 3.52, with SD=0.87, which is described as Agree and interpreted of High level. This means that the students were able to achieve second highest level of Self-confidence towards Study Habits in learning Mathematics.

Self-confidence can be more situation-specific, or it can relate to a broad feeling of trust in one's capacity to govern its life. A person can achieve more success in both personal and professional lives by maintaining a healthy amount of self-confidence. For instance, studies have shown that those with higher levels of confidence typically outperform their peers in the classroom (Morin, 2022). Furthermore, studies have shown a correlation between higher levels of self-confidence and stronger motivation to practice can also influence a person's drive to achieve their goals and objectives. Even how a person presents himself to others depends on his level of confidence.

In the same table, the highest indicator, *I am willing to take more effort in Mathematics.* It has a Mean of 3.90, with SD=0.84, which is described as Agree and interpreted as High level. This means that the eagerness of the students to learn Mathematics concepts as high as they were willing to study and understand them. One of the important factors to consider in learning any subject is its willingness to accept challenges and explore new things even if it has uncertainties and are difficult. The fact that these students showed willingness should inspire teachers to provide the best learning experience to these students so that their outlook toward the subject will not wane.

Possessing the aptitude and eagerness to learn facilitates learning as well as expedites job search and opportunities. It aids in developing the best approaches and acquiring crucial knowledge essential to performance and development. Anyone can demonstrate the behavior of commitment to learning, regardless of background. Gaining additional responsibility at school requires demonstrating effective learning and a willingness to advance one's abilities and knowledge (Hinkley, 2021).

Meanwhile, the lowest indicator , *I enjoy Mathematics class than in any other class.* It has a Mean of 3.20, SD=0.93, which is described as Neutral and interpreted as a Moderate level. This means that students have less enjoyment and excitement in attending Mathematics classes and activities. This implies that Mathematics classes continue to be the least favorite session being participated by students. This is because oftentimes, the topics are challenging, and usually, the mood of the class is serious. Thus, students feel bored and, at the same time, challenged. Thus, teachers handling this subject must incorporate activities and strategies to make the teaching and learning process fun and exciting (Oco, 2022).

Table 3.*Students' Level of Study Habits on Strategies in Learning Mathematics*

Indicators	Mean	SD	Description
1. I can read and understand the majority of content found in my Mathematics textbook/ Module.	3.36	0.87	Neutral
2. I can reword the majority of Mathematics content in my textbook into my own words.	3.20	0.88	Neutral
3. If I have a question, I can use my textbook to help me find an answer to my question.	3.59	0.87	Agree
4. Reading over the lesson before we discuss it helps me understand the lesson better.	3.74	0.90	Agree
5. I ask more knowledgeable questions after reading the Mathematics topic.	3.51	0.83	Agree
6. I can understand Mathematics through reading my textbook/ Module.	3.15	0.89	Neutral
7. I enjoy sharing my thoughts and observations during class discussions.	3.50	0.93	Agree
8. I feel confident in my abilities in Mathematics.	3.21	0.83	Neutral
9. I contribute to class discussions in my Mathematics class.	3.64	0.87	Agree
10. I often participate in class-solving activities.	3.14	0.85	Neutral
11. I listen to my classmates' ideas, and I also share mine.	3.55	0.88	Agree
12. I can adjust to any partner or group that I will be assigned with.	3.54	0.93	Agree
13. I listen and analyze my groupmates' opinions.	3.63	0.90	Agree
14. I make sure that heated arguments are avoided during group sharing.	3.46	0.94	Agree
15. I focus my attention on my teacher's discussions and questions.	4.07	0.93	Agree
16. I make sure that I contribute meaningfully on my group's outputs.	3.79	0.95	Agree
Overall Mean	**3.51**	**0.89**	**Agree**

Note: 4.20-5.00 Strongly Agree 3.40 - 4.19 Agree 2.60 - 3.39 Neutra 1.80 - 2.59 Disagree 1.00 - 1.79 Strongly Disagree

Table 3 presents data on students' Strategies in learning Mathematics. It has Overall Mean of 3.56, with SD=0.89, which is described as Agree and interpreted as High. This means that the students have a high level of strategies used in learning Mathematics. This implies that learning Mathematics is always challenging for students as there are many aspects that need to be tackled and learned to have a better understanding and appreciation of the subject. This is why students employ various strategies in learning as they also realize the importance of the subject in the academe and in real-life situations.

Mathematics, in contrast to other subjects, reinforces itself. Without a solid grasp of the earlier materials, a student cannot proceed. And this makes learning Mathematics a challenge. Students need to do more than just drill multiplication tables and memorize formulas if they want to succeed in Arithmetic. They must fully comprehend the meaning of their arithmetic teachings and how they apply to everyday life. Students need a range of instructional techniques to get to that higher level of knowledge (Crowe, 2021).

In the same table, the highest indicator ,*I focus my attention on my teacher's discussions and questions.* It has a Mean of 4.07, with SD=0.93, which is described as Agree and interpreted as High. This means that during the teaching and learning process, the students listen carefully to the teachers' discussion. Thus, teachers must prepare strategies and activities that will continue to attract the interest of the students.

This means that utilizing a set of strategies and activities must be in accordance with the needs and kind of learners. It must also get aligned with the standard set on that particular competency so that learners will not get confused as they go on with the lesson. Enriquez (2020) claimed that teachers value their jobs highly and make sure that they do not mess up. They always treat everyone with respect and professionalism. Even learners that are minors are treated with respect by providing strategies and activities that are best suited to them as well.

Meanwhile, the lowest indicator, *I often participate in class-solving activities.* It has a Mean of 3.14, with SD=0.85, which is described as Neutral and interpreted as a Moderate level. This means that the students have difficulty participating in the teaching and learning process in Mathematics. Thus, teachers should have equal treatment to students and avoid favoritism.

This data means that teachers should perform excellently in maintaining learning that promotes fairness, equality, motivation, and inspiration. Teachers should ensure that the students are in a learning environment where they can hone their knowledge and skills at the same level as their classmates without being judged unfairly or treated unequally. Ampo (2022) claimed that students that are motivated and inspired work hard to attain the highest level of learning especially when they are evaluated and treated equally. Teachers should always apply fairness and equality in the dealings of their learners and in making their comments and evaluations.

Table 4.*Students' Overall Study Habits*

Variables	**Mean**	**SD**	**Description**
Attitude	3.47	0.88	Agree
Confidence	3.52	0.87	Agree
Strategies in Learning Mathematics	3.51	0.89	Agree
Overall Mean	**3.50**	**0.88**	**Agree**

Note: 4.20-5.00 Strongly Agree 3.40 - 4.19 Agree 2.60 - 3.39 Neutra 1.80 - 2.59 Disagree 1.00 - 1.79 Strongly Disagree

Table 4 discloses the student's overall level of Study Habits associated with learning Mathematics. It has an Overall Mean of 3.50, with SD=0.88, which is described as Agree and interpreted as High level. This means that the students were able to achieve second highest level of study habits associated with learning Mathematics. This implies that teachers should provide better learning activities to students in order to improve their learning experience and performance. The impact of the teacher on the student's impression of learning Mathematics and its study habits is crucial. Thus, teachers should not take this lightly.

The focus of the teacher will alter how one studies. Effective instruction can improve one's study habits when all four of its components, like knowledge, understanding, application, and skill, are met. Some educators promote memorizing, while others stress the importance of learning via comprehension rather than

memorization. As a result, both a student and a teacher contribute to the development of study habits. The methods that teachers use to teach are distinctive. As a result, a student chooses a certain strategy for a given class. The student is just like the teacher (Janubas, 2022).

3.2 Level of Performance in Mathematics

Table 5.*Students' Performance in Mathematics*

Level of Performance	Frequency	Percentage	Mean	SD	Interpretation
Outstanding	69	30	89.13	4.73	Very Satisfactory
Very Satisfactory	104	45			
Satisfactory	42	18			
Fairly Satisfactory	16	7			
Did not Meet Expectation	0	0			
Total	**231**	**100.00**			

Note: 90%-100% Outstanding 85%-89% Very Satisfactory 80%-84% Satisfactory
75%-79% Fairly Satisfactory 74% and Below Did not Meet Expectations

Table 5 shows the Students' level of performance in Mathematics. It has an Overall Mean of 89.13, with SD=4.73 ,which is interpreted as Very Satisfactory. Moreover, sixty-nine (69) out of two hundred thirty-one (231) of the students got the scores at outstanding level, one hundred-four (104) out of two hundred thirty-one (231) of the students got the scores at very satisfactory level, forty-two (42) out of two hundred thirty-one (231) of the students got the scores at satisfactory level and sixteen (16) out of two hundred thirty-one (231) of the students got the scores at fairly satisfactory level. This means that the students achieved the second highest performance level in Mathematics.

Performance in Mathematics for students is crucial to their success and learning development. It will allow them to develop higher-order skills that can also be applied in other learning areas. Mathematics is a very important subject. Therefore, mastery and understanding of its concepts are a must for students. One of the most crucial disciplines in daily life is Mathematics. It is crucial in the technological age.

Mathematical expertise is essential for navigating the mechanical world and adapting to rapidly evolving information technologies. The mother of all sciences is Mathematics. Nothing in the world is possible without a basic understanding of Mathematics. Without Mathematics, the world cannot advance. Moreover, Mathematics satisfies most human requirements relating to various facets of daily life (Bartle, 2020). Therefore, concepts in Mathematics must be mastered by students, and teachers may provide assistance like remedial activities and provision of other learning materials like worksheets, etc. Jamis (2022) agreed and further stressed that there are topics in Mathematics that require ample time to be fully mastered and learned by the students. Therefore, teachers must emphasize this by learning strategies or interventions in order to make the teaching and learning process in Mathematics interesting and fun for the learners.

Guinocor (2020) study revealed that students' learning modes differ. However, with assistance given to students, they could still achieve higher Mathematics performance. Yeh (2019) revealed that helping low-achieving students was beneficial. They perform much better performance after assistance is given. Retention levels also increased along with the Mathematics scores.

Moreover, the research results of Ullah (2018) and Armenta (2019) revealed that providing assistance like remedial classes to students have posted valuable and significant improvements on students' achievements and performance. Therefore, initiatives like this can be of great help to struggling learners or students. This can lead to better study habits and performance among students.

3.3 Relationship between Factors Affecting mathematics Learning and Performance

Table 6 exhibits the Test correlation between Students' Study Habits and Performance in Mathematics. In terms of Attitude, it has a computed r-value of 0.9132 with p-value=0.000 with the description of a strong positive relationship and is significant at 0.05 level of significance. This means that a significant relationship was registered between study habits like attitude towards students' Mathematics performance. Thus, the null hypothesis is rejected.

This means that study habits such as attitude have a significant relationship to the learning performance of the students in Mathematics. Students are still very young and considered children; therefore, they must be given priority, attention, and assistance as they are still in their teenage developmental stage. This stage is crucial as this is the transition of the child's well-being from young to adult.

Table 6.*Test correlation of Students' Study Habits and Performance in Mathematics*

	Academic Performance			
Study Habits	r-value	p-value	Description	Interpretation
Attitude	0.9132	0.000	Strong Positive Relationship	Significant
Confidence	0.0184	0.7573	No Linear Relationship	Not Significant
Strategies in Learning Mathematics	0.8279	0.000	Strong Positive Relationship	Significant

Note: *significant at p<0.05 alpha level S – significant NS – not significant

r-Values	*Description*	*r- Values*	*Description*
0.00 – 0.09	No Linear Relationship (NLR)	0.10 – 0.49	Weak Positive Relationship (WPR)
0.50 – 0.69	Moderate Positive Relationship (MPR)	0.70 – 0.99	Strong Positive Relationship (SPR)
1.00-	Perfect Linear Relationship (PLR)		

Independent of variables like a child's IQ, a positive attitude toward Mathematics improves the brain's memory region and predicts Mathematics achievement. Even after statistically controlling for working memory, Mathematics anxiety, general anxiety, and overall attitude toward academics, Mathematics performance still connected with a favorable attitude toward Mathematics. Children who had negative attitudes toward Mathematics tended to perform poorly in the subject, whereas those who had favorable attitudes varied in their levels of Mathematics proficiency (Digitale, 2018).

In terms of Self-Confidence, it has the computed r-value of 0.0184 with p-value=0.7573, which is described as no linear relationship and is not significant at 0.05 level of significance. This means that no significant relationship was registered between students' self-confidence on learning towards their performance Mathematics. Thus, the null hypothesis is accepted. This means that self-confidence have no bearing on the students' performance in Mathematics. This only show that indeed self-confidence is not enough for the students to learn and have high performance in Mathematics. They need other study habits in order to succeed in learning and studying Mathematics.

In terms of Strategies in Learning Mathematics, has the computed r-value of 0.8279 with p-value=0.000 with the description of strong positive relationship and is significant at 0.05 level of significance. This means that there is a significant relationship between students' strategies in learning Mathematics towards their performance. Thus, the null hypothesis is rejected. This means that strategies in learning Mathematics of students have a significant relationship to their performance in Mathematics. This only show that various strategies in learning the subjects can result in better performance in Mathematics. They need more study strategies in order to succeed in learning and studying Mathematics.

Students are still very young and considered children; therefore, they must be given priority, attention, and assistance as they are still in their teenage developmental stage. This stage is crucial as this is the transition of the child's well-being from young to adult. Thus, teachers and parents must re-enforce difficulties and struggles in learning development, especially in reading. Instilling a love for Mathematics provides the students a head starts on developing their independence and motivation. In addition to helping develop social-emotional skills and, of course, creativity, it aids in their learning to make sense of both the physical world and other people (George, 2019).

Moreover, instead of having to speak in front of the entire class, some students find that speaking in small groups makes them feel safer and more at ease. They have the chance to feel more comfortable discussing their ideas through collaborative activities. This tactic enhances students' speaking and listening abilities in addition to helping them develop their social skills. Each student gains knowledge from their partner when brainstorming. As they learn new terms from their peers and build on their past knowledge, this can aid children in growing their skills in Mathematics (Cowling, 2021).

4. CONCLUSION

Based on the findings of this study, the following are concluded: Students have a very positive attitude toward their study habits when learning Mathematics. Students felt that studying and learning Mathematics

Comment [BRW5]: Please provide the following:
1. The limitation of the study.
2, Implication of the study.
3. Recommendation for future studies.

was essential. Students' success and academic growth depend heavily on their Mathematics performance.it is essential for pupils to master and comprehend its concepts. Students' study habits in terms of attitudes have an impact on how they learn Mathematics.

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