



TEACHER EMOTIONAL SUPPORT AND PARENTAL INVOLVEMENT ON THE ATTITUDE OF STUDENTS TOWARD MATHEMATICS

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ABSTRACT

The purpose of the study is to determine the regression analysis of behavioral engagement on the relationship between the teacher emotional support and parental involvement on attitude of students toward mathematics. Quantitative, non-experimental research utilizing descriptive correlational techniques analysis was utilized in this study. A sample of 198 randomly selected grade 10 students answered the surveys on the two variables. Results showed that the levels of teacher emotional support, parental involvement, attitude of students toward mathematics. There were no significant relationships between teacher emotional support and attitude of students toward mathematics, and parental involvement and attitude of students toward mathematics. Results also revealed that behavioral engagement partially significantly affected the relationship between teacher emotional support and parental involvement. It no signifies that teachers should look into other factors that affect the academic commitment of a student and not just their instructional support. Teachers should also consider the attitude of students toward mathematics, specifically their self-confidence, value, enjoyment, and motivation as they partially or significantly affect the relationship between teacher emotional support and parental involvement.

KEYWORDS: Teacher Emotional Support, Parental Involvement, And Attitude Of Students Toward Mathematics, Education, Philippines

INTRODUCTION

The attitude of students toward mathematics remains a persistent and growing concern in the education sector. This attitude significantly influences how students engage with the subject, affecting their learning outcomes and overall academic performance. Various factors contribute to students' negative perceptions of mathematics, including lack of motivation, teaching methods, limited parental support, and learning environments. The issue has become more evident in recent years, particularly with the shift to home-based and flexible learning, where students often face reduced teacher interaction and fewer learning resources. These challenges highlight the need for effective strategies to foster positive attitudes toward mathematics and improve student engagement in the subject (Reyes & Tan, 2020).

In China, students' negative attitudes toward mathematics were strongly linked to low academic performance and poor engagement in learning activities. The research showed that many students believed mathematics was too difficult or irrelevant to their daily lives, leading to a lack of motivation and confidence. This issue is not unique to China, as similar patterns have been observed globally. These findings highlight a general problem: students' negative attitudes toward mathematics continue to be a significant barrier to effective learning, resulting in low participation, reduced achievement,

and long-term academic struggles in the subject (Zhang et al., 2022).

In the Philippines, mathematics teachers continue to face the persistent

challenge of addressing students' negative attitudes toward the subject. A recent study conducted in secondary schools in Dinalungan and Casiguran, Aurora, revealed that Junior High School students demonstrated low motivation in learning mathematics, which was associated with feelings of anxiety and discomfort (Laranang & Bondoc, 2020). These negative emotional responses contribute to a lack of engagement and poor academic outcomes. This reflects a broader issue in the education system, where students' attitudes significantly hinder effective mathematics learning and performance.

There is an increasing urgency to conduct further research aimed at improving students' interest and attitudes toward mathematics. While the roles of teacher emotional support and parental involvement have been widely acknowledged as critical factors in shaping students' attitudes, existing studies tend to examine these influences in isolation or lack context-specific analysis. What remains underexplored is how the combined impact of emotional support from teachers and the level of parental involvement affects students' motivation and disposition toward learning mathematics, particularly in the Philippine secondary school setting. This gap highlights the



need to investigate how these two factors interact and contribute to fostering a more positive attitude among learners who struggle with the subject.

The researcher has not encountered any local study that examines the combined influence of teacher emotional support and parental involvement on students' attitudes toward mathematics using the same group of participants. This gap highlights the need to explore how these two factors jointly impact student attitudes, particularly within the Municipality of Asuncion. This is in line with the recommendation of Petersen et al. (2019) in their study *"Understanding Student Motivation in Mathematics: A Call for Further Exploration of Contributing Factors"*, which emphasized the importance of investigating new angles that influence learners' attitudes. Yang et al. (2021), in their research titled *"The Role of Teacher Emotional Support in Enhancing Student Engagement and Confidence in Mathematics"*, found that students' confidence and participation were significantly shaped by how emotionally supported they felt by their teachers. Likewise, Chowdhury & Ferdousi (2022) in *"Teacher Emotional Encouragement and Its Effect on Student Willingness in Mathematics Learning"* revealed that students were more willing to engage with challenging tasks when supported by teachers emotionally. On the other hand, Kim & Park (2023) in *"Parental Involvement in the Post-Pandemic Era: A Predictor of Student Motivation and Academic Behavior"*, showed that parents still play a crucial role in shaping positive academic behaviors after the return to face-to-face classes. These studies, however, focused on the individual effects of either teachers or parents. Therefore, examining the combined relationship between teacher emotional support, parental involvement, and students' attitude toward mathematics in a local context is timely and essential in addressing learners' declining interest in the subject.

Moreover, the researcher plans to disseminate the findings of this study by joining a public forum where the relevant persons will be informed about the result of the study. A copy of this study will also be furnished and will be submitted to the Schools Division office of Davao del Norte. In this way, the Department of Education will have a look at the results of this research. Publishing this research is a potential way to disseminate valuable information. It will also serve as the blueprint that helps students ignite their interest and attitude to learn more in Mathematics. This support was necessary to encourage a positive attitude toward mathematics. The strong influence of the affective dimensions a teacher emotional support significantly affects the students' behavioral disposition toward learning the said subject. This is usually manifested through teachers care, respect, concern for, interest in students, and fair treatment.

Research Objectives

The purpose of the study was to determine the influence of teacher emotional support and parental involvement on students' attitudes toward mathematics. This study aimed to address the following objectives.

1. To determine the level of teacher emotional support in terms of:
 - 1.1 positive climate;
 - 1.2 teacher sensitivity; and
 - 1.3 regard for adolescent perspective.

2. To determine the level of parental involvement in terms of:
 - 2.1 encouragement;
 - 2.2 Modeling;
 - 2.3 Reinforcement; and
 - 2.4 Instruction.
3. To determine the level of attitude of students toward mathematics in terms of:
 - 3.1 self-confidence;
 - 3.2 value;
 - 3.3 enjoyment; and
 - 3.4 motivation.
4. To determine their significant relationship between
 - 4.1 teacher emotional support and attitude of students toward mathematics; and
 - 4.2 parental involvement and attitude of students toward mathematics.
5. To determine whether teacher emotional support and parental involvement significantly influenced students' attitudes toward mathematics.

RESEARCH METHODOLOGY

Research Design

The study was conducted using a quantitative, non-experimental methodology. This approach examined social issues without attempting to alter the participants' environment. There was no randomized selection of subjects. As a result, the data were limited in supporting the proposed cause-and-effect relationships (Frey, 2018).

Participants

In this study, the respondents were Grade 10 Junior High School students from four (4) secondary public schools in the Municipality of Asuncion, Division of Davao del Norte, for S.Y. 2024–2025. The sample size was generated using the Raosoft software with a 0.05 margin of error and a 95% confidence level. The sampling technique used was stratified random sampling, specifically equal allocation, to ensure accurate distribution of samples, the researcher utilized stratified random sampling with proportional allocation. The respondents were chosen because the study focused on teacher emotional support and parental involvement in relation to students' attitudes toward mathematics. It was ensured that the sampling procedure was appropriate for the needs of this study.

Data Collection

In collecting, the researcher looks the following steps:

Questionnaire Development. The researcher reviewed questionnaires drawn from journal articles relevant to the three variables.

Revision and Validation of Questionnaires. After the questionnaires were drafted, they were submitted to a panel of experts for evaluation and contextualization. The researcher incorporated the panel's suggestions in revising the survey questionnaires.

Requesting Approval to Carry out the Study. The researcher requested permission to conduct this study from the secondary schools involved through a formal letter, which he signed and



was noted by his research adviser and the director for research and development.

Distribution and Retrieval of the Questionnaire. Printed survey questionnaires were distributed individually to respondents enrolled in mathematics programs who were present on campus.

Collection and Tabulation of the Data. After the survey was conducted, the researcher retrieved the completed instruments and collected the data from the respondents. The data was analyzed with the assistance of a statistician, and the findings were subsequently interpreted. Appropriate statistical tools were employed to ensure the reliability and validity of the analysis. Based on the final dataset, conclusions were drawn, and recommendations were formulated. These recommendations were aligned with the study's objectives and

designed to address the observed gaps or implications found in the results.

Statistical Treatment of Data

The data gathered were classified, analyzed, and interpreted using the following statistical tools.

Mean. It was utilized to determine the levels of teacher emotional support, parental involvement, and attitude toward mathematics among Grade 10 students.

Pearson-r Correlation. It was used to determine whether there was a significant relationship between the independent variable's teacher emotional support and parental involvement and the attitude toward mathematics of Grade 10 students.

Regression. This was used to determine whether teacher emotional support and parental involvement had a significant influence on attitude of students toward mathematics.

RESULTS AND DISCUSSION

Table 1
Summary on the Level of Teacher Emotional Support

Indicators	Mean	Description
Positive Climate	4.75	Very High
Teacher Sensitivity	4.75	Very High
Adolescent Perspective	4.71	Very High
Overall	4.74	Very High

Summary on the Level of Teacher Emotional Support

As shown in Table 5, the overall mean score for the level of teacher emotional support is 4.74, which falls under the very high category. This indicates that, in general, students perceive their teachers as highly supportive in creating an emotionally positive and responsive classroom environment.

Among the three indicators, positive climate and teacher sensitivity received the highest mean scores, both at 4.75. This

implies that teachers are successful in promoting warm and respectful relationships, as well as being responsive to students' academic and emotional cues. These areas reflect strong teacher-student interactions and attentiveness to learners' needs. The adolescent perspective indicator, while slightly lower at 4.71, still falls under the very high category. This suggests that teachers generally consider students' ideas and viewpoints in their teaching, although there is slightly less emphasis compared to the other two indicators.

Table 2
Summary of the Level of Parental Involvement

Indicators	Mean	Description
Encouragement	4.90	Very High
Modeling	4.93	Very High
Reinforcement	4.88	Very High
Instruction	4.95	Very High
Overall	4.91	Very High

Summary On the Level of Parental Involvement

Based on the results in Table 10, the overall mean score for the level of parental involvement is 4.91, which is interpreted as very high. This indicates that, overall, parents are actively

engaged in supporting their children's education through various forms of involvement.



Among the four indicators, Instruction received the highest mean score of 4.95, showing that parents are very much involved in guiding their children in learning activities, such as helping with assignments and providing academic support at home. Modeling follows closely with a mean of 4.93, suggesting that parents set positive examples and attitudes toward learning, which students are likely to emulate.

Encouragement, with a mean of 4.90, also falls under the very high category, indicating that parents regularly motivate their children and express support for their educational progress. Lastly, Reinforcement received the lowest mean score at 4.88, though still rated as very high. This implies that while parents provide praise and rewards for academic performance, it is slightly less emphasized compared to the other forms of involvement.

Table 15
Summary On the Level of Attitude of Students Toward Mathematics

Indicators	Mean	Description
Self-Confidence	4.84	Very High
Value	4.84	Very High
Enjoyment	4.74	Very High
Motivation	4.80	Very High
Overall	4.81	Very High

Summary of the Level of Students' Attitude towards Mathematics

As shown in Table 15, the overall mean score for the students' attitude toward mathematics is 4.81, which is interpreted as very high. This means that students generally have a very positive attitude toward learning mathematics, showing strong confidence, interest, and motivation in the subject.

Among the indicators, Self-Confidence and Value both received the highest mean scores of 4.84, suggesting that students believe in their ability to succeed in math and recognize its importance in their lives and future goals. This reflects a strong belief in their capabilities and a high regard for the relevance of mathematics.

In addition, motivation comes next with a mean of 4.80, indicating that students are highly driven to engage and perform well in math-related tasks. Finally, Enjoyment, while slightly lower at 4.74, still falls under the very high category, showing that students generally enjoy learning math, even if it is not as strong as their confidence, value, and motivation toward the subject.

Significant Relationship Between Teacher Emotional Support and Attitude of Students Toward Mathematics

The table 16 shows the relationship between teacher emotional support and the attitude of students toward mathematics. The computed R-value is 0.0001, which indicates an extremely weak correlation between the two variables. This means there is almost no linear relationship between how emotionally supportive teachers are and how students feel toward learning mathematics.

The P-value is 0.998, which is much greater than the significance level of 0.05. This means that the relationship observed between the two variables is not statistically significant and may have occurred by chance.

Since the P-value is higher than 0.05, the decision is to accept the null hypothesis (Ho). Therefore, it is concluded that there is no significant relationship between teacher emotional support and students' attitude toward mathematics based on the data gathered.

Table 16
Significant Relationship Between Teacher Emotional Support and Attitude of Students Toward Mathematics

Variable	Mean	R-Value	P-Value	Decision a=0.05
Teacher Emotional Support	4.74			
Attitude Of Students Toward Mathematics	4.81	0.0001	.998	Ho Accepted

Significant Relationship Between Parental Involvement and Attitude of Students Toward Mathematics

Table 17 shows the analysis of the relationship between parental involvement and the attitude of students toward mathematics. The computed R-value is 0.111, which indicates a very weak

positive correlation between the two variables. This means that while there is a slight upward trend, it is not strong enough to conclude a meaningful relationship.



The P-value is 0.121, which is greater than the 0.05 level of significance ($\alpha = 0.05$). This indicates that the correlation is not statistically significant, meaning the result could have occurred by chance and cannot be generalized as a real association in the population.

Since the P-value is higher than 0.05, the null hypothesis (H_0) is accepted. Therefore, it is concluded that there is no significant relationship between parental involvement and students' attitude toward mathematics based on the results of this study.

Table 17
Significant Relationship Between Parental Involvement and Attitude of Students Toward Mathematics

Variable	Mean	R-Value	P-Value	Decision $\alpha=0.05$
Parental Involvement	4.91	.111	.121	Ho Accepted
Attitude of students towards mathematics	4.81			

Conclusion

Based on the findings of the study, conclusions were drawn in answer to question raised in the previous chapter. The respondents from the high school level of teacher emotional support the high results indicates that students perceive their teacher as caring, understanding, and emotionally responsive. This suggests that the teacher has successfully created a safe and nurturing classroom environment where students feel valued and respected. Emotional support from teachers plays a critical role in students' academic and personal development. When students feel emotionally supported, they are more likely to be engaged in learning, participate actively in class, and develop positive attitudes toward school.

Moreover, High parental involvement may include attending school events, helping with homework, participating in parent-teacher meetings, and staying informed about their child's progress. When parents are involved, students tend to feel more supported, which can boost their confidence, motivation, and performance in school. Also suggests that the school has effective strategies in place to encourage and facilitate parental engagement, such as open communication channels, regular updates, and a welcoming environment for families. Overall, strong parental involvement reflects a positive school community where parents and educators work together to ensure the success and well-being of every student. The high result in the variable attitude of students towards mathematics indicates that students have a positive perception and strong interest in the subject. This means they likely enjoy learning math, feel confident in their abilities, and believe that mathematics is useful and valuable in real life. also reflect that the teacher is making math relatable and accessible, possibly through real-world applications, interactive lessons, or differentiated instruction.

Additionally, it shows that students are likely to put effort into understanding concepts, are open to challenges, and are less likely to develop math anxiety. Overall, a strong positive attitude towards mathematics supports deeper learning and better academic outcomes. the high results in both teacher emotional support and students' attitude towards mathematics indicate a positive and supportive classroom environment. Students feel emotionally safe, valued, and understood by their

teacher, which boosts their confidence and motivation. This emotional support directly contributes to students developing a strong, positive attitude toward mathematics, leading to greater interest, enjoyment, and engagement in the subject. Together, these factors create a learning space where students are more likely to succeed academically and feel confident tackling challenges in math.

Also, the high results in both parental involvement and students' attitude towards mathematics highlight the important role that families play in shaping students' learning experiences. When parents are actively involved through helping with homework, discussing school activities, or showing interest in academic progress students feel supported and motivated. This involvement reinforces the value of education and encourages a growth mindset, especially in a subject like mathematics that some students may find challenging.

Recommendations

Since the results of teacher emotional support is very high, it is hereby recommended that teachers may continue to do the mechanisms that provide the students with emotional support. This can be done by maintaining the positive climate, sensitivity, and regard for adolescents. They may also create other mechanisms like having programs involving both the students and teachers that would further increase emotional support. These can be mentoring programs, especially in mathematics.

further, the parents are encouraged to continue to be actively involved in their children's academic activities as students. Very High parental involvement is our markable finding that can be used as a reference for crafting programs that will strengthen the parents and their children. The teachers may also create enrichment activities, Math Fair, and competitions to help the students increase their positive attitude towards mathematics. These activities can either be held within the class or for the entire school, in general. Through these, the students will develop increased self-confidence and enjoy learning mathematics more. They may also provide opportunities where the students can develop how they value learning mathematics by contextualizing the lessons so that they can relate more.



Moreover, the students are also enjoined to remain positively motivated to learn Mathematics, as shown in their very high attitude towards mathematics. They may continue their routines so that their attitude towards mathematics will still be much observed. The factors that may have caused this motivation may be maintained so they will continue to be motivated to learn.

Additionally, the school administrators are also encouraged to support the teachers' programs or activities that aim to maintain or increase the level of teacher's emotional support, parental involvement, and attitude toward mathematics. The Department of Education may add more activities during the national competitions in mathematics and launch new ways to recognize the students so that they will be more motivated to engage in learning mathematics. The future researchers may use the results of this study as a reliable data for future searches related to the topic of this study. They are also encouraged to discover further the factors that have caused the very high level of attitude towards Mathematics.

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