

Parental Involvement and Elementary Learners' Numerical Achievement in Malita, West District

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Abstract. The study was conducted to determine the relationship between parental involvement and elementary learners' numerical achievement in Malita West District, Davao Occidental Schools Division. The study used a non-experimental descriptive-correlational research design, utilizing an adapted survey instrument to gather responses from the randomly selected 120 teacher-respondents. Data gathered were treated using Mean scores with descriptive interpretation, Pearson r , and Simple Linear Regression Analysis. Findings revealed that the extent of parental involvement in terms of collaboration with teachers, participation in school activities, homework completion, and attendance to conferences was moderately extensive and likewise with learners' numerical achievement in terms of attendance in class, classroom participation, and performance tasks, written tasks, denotes moderately extensive. There was a relationship between parental involvement and numerical achievement. Domains of parental involvement in terms of homework completion, attendance to conferences, participation, and collaboration with teachers significantly influenced learners' numerical achievement. Schools could create a supportive and stimulating environment for intensive numerical learning and development by promoting advanced collaboration.

KEY WORDS

1. Parental involvement 2. elementary learners 3. Numerical achievement.

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1. Introduction

Parental involvement in learners' numerical achievement has been an essential topic in educational research for several years. Several studies have shown that parent's involvement in their children's learning, particularly in mathematics, can positively impact their academic achievement. However, despite the benefits, issues surrounding parental involvement in international settings still need to be addressed. In the global context, as Fan and Williams (2017) posited that parental involvement in mathematics learning has been associated with better academic outcomes, increased motivation, and a higher sense of achievement in students. Similarly, a study by Clark et al. (2019) found that students whose parents were more involved in their mathematics learning had higher mathematics achievement scores. However, there are still challenges surrounding parental involvement in international settings. One issue is the cultural and language barriers that can impede effective communication between parents and

teachers. This can lead to misunderstandings and a lack of trust, hindering parental involvement in their children's education (Liu Wilder, 2018). Another area for improvement is the need for more resources, such as time and access to technology, which can prevent parents from being involved in their children's learning (Tucker-Drob Harden, 2021). To address these issues, schools and educators can implement strategies such as providing translation services, offering workshops, and training for parents, and creating opportunities for parent-teacher communication (Liu Wilder, 2018; Tucker-Drob Harden, 2021). Educators and parents can create a positive and supportive environment that promotes learners' mathematics achievement by working together. Moreover, the Philippines faces unique challenges in implementing parental involvement strategies due to the country's cultural, economic, and social factors. According to a meta-analysis by Fan and Williams (2017), parental involvement in mathematics education positively impacts learners' academic outcomes. A study by Diestro, Masilang, and Go (2018) found that parental involvement in mathematics education positively affects learners' attitudes toward mathematics and academic performance. However, implementing parental involvement strategies in the Philippine setting can be challenging due to cultural factors such as "hiya" (shame) culture, where individuals avoid conflict or embarrassment and may not actively participate in school-related activities (Go, 2020). The country's economic status also affects parental involvement, where parents may need more resources or time to participate in their children's education (Diestro et al., 2018). To address these challenges, Go (2020) suggests that teachers should be trained to develop culturally responsive practices to engage parents and promote parental involvement. This can be done through community-based workshops and training for teachers and parents to help them understand the importance of parental involve-

ment and overcoming cultural barriers. Additionally, implementing technology-based communication platforms can promote parental involvement, where parents can remotely participate in their children's education (Peralta, 2017). In conclusion, parental involvement in learners' numerical achievement positively impacts academic outcomes. However, implementing parental involvement strategies in the Philippine setting faces unique challenges due to cultural, economic, and social factors. Educators and parents can work together to promote learners' numerical achievement in the Philippine context by developing culturally responsive practices and implementing technology-based communication platforms. Malita, West District, Davao Occidental, faces unique challenges in implementing parental involvement strategies due to its geographic, economic, and social factors. While there is a need for more research explicitly addressing parental involvement in learners' numerical achievement in Davao Occidental, it is essential to note that the locality faces unique challenges in promoting parental involvement due to its geographic, economic, and social factors. These challenges can affect parental involvement in learners' numerical achievement and potentially impact academic outcomes. Therefore, it is essential to understand and address these challenges in promoting parental involvement and learners' numerical achievement in Davao Occidental. Thus, this study is presented.

1.1. Review of Significant Literature—

Parental involvement plays a crucial role in the academic success of students, particularly in their performance in mathematics. Research shows various ways parental involvement positively impacts students' achievement in mathematics and other subjects.

1.1.1. Parental Involvement and Academic Achievement—

Studies consistently show that parental involvement in children's education positively affects their academic achievement

and psychological well-being. For instance, a meta-analysis by Wang and colleagues (2022) found a significant positive relationship between parental involvement and academic achievement across 71 studies involving over 50,000 participants from 16 countries. The effect was especially pronounced for younger students and those from low-income families.

1.1.2. Homework Completion—Parental involvement in homework completion is critical for students' success. Research by Fan and colleagues (2018) indicates that parental involvement in homework positively predicts academic achievement among Chinese primary school students, with significant impacts on students from low-income families. Additionally, parental involvement helps improve students' study habits and time management skills, further enhancing their academic performance.

1.1.3. Parent-Teacher Conferences—Attendance at parent-teacher conferences also positively influences academic outcomes. Studies show that such involvement leads to better academic achievement, particularly in subjects like science and mathematics. Enhanced communication between parents and teachers through these conferences facilitates greater parental engagement and support for students' education.

1.1.4. Participation in School Activities—Parents' participation in school activities correlates with higher academic achievement in their children. Research highlights that students whose parents are involved in school events tend to have better academic performance, increased motivation, and engagement in learning. This involvement fosters a supportive home environment that complements classroom learning, resulting in improved academic outcomes.

1.1.5. Collaboration with Teachers—Effective collaboration between parents and teachers is another crucial aspect of parental involvement. Studies demonstrate that when parents and teachers work together, students experience higher levels of educational attainment, better

attendance, and fewer behavior problems. This collaboration provides consistent support for students, enhancing their learning experiences and promoting academic success.

In conclusion, parental involvement significantly impacts students' academic achievement, particularly in mathematics. Schools and policymakers should encourage and facilitate various forms of parental involvement to enhance student outcomes. This includes supporting homework completion, promoting attendance at parent-teacher conferences, encouraging participation in school activities, and fostering effective collaboration between parents and teachers.

1.2. Theoretical Framework—The theory of parental involvement in education has a few authors, as it has been developed through the work of many researchers and scholars over several decades. However, some of the key contributors to the theory of parental involvement include Joyce Epstein (2011), Karen Mapp (2013), and William Jeynes (2018), among others. They have conducted extensive research on the impact of parental involvement on children's academic success and well-being and have advocated for a collaborative approach between parents and educators to support children's learning and development. Parental involvement in education has been widely recognized as a critical factor in promoting academic success and well-being for children. According to the theory of parental involvement, parents play an essential role in their children's education by providing support, guidance, and resources to enhance their learning experiences. One of the key concepts in the theory of parental involvement is the idea of a "home-school partnership." This refers to the collaboration between parents and educators in supporting children's academic and social-emotional development. Researchers have found that when parents are involved in their children's education, they are more likely to be aware of their child's academic progress, provide a supportive learning environment at

home, and communicate effectively with teachers (Jeynes, 2018). Another critical aspect of the theory of parental involvement is the idea that parental involvement can have a positive impact on children's motivation and attitudes toward learning. For example, a study conducted by Fan and Chen (2020) found that when parents were involved in their children's education, their children had higher levels of academic motivation and engagement. Similarly, a study by Hill and Tyson (2019) found that parental involvement was associated with higher levels of academic self-efficacy and positive attitudes toward school. The theory of parental involvement also suggests that the effectiveness of parental involvement can vary depending on the type of involvement and the child's age. For example, a study by Dumas and Ross-Sheriff (2021) found that parent-teacher communication was essential for young children, while older children benefited more from parental involvement in extracurricular activities and helping with homework. In addition, the theory of parental involvement emphasizes the importance of cultural and linguistic diversity in understanding and promoting parental involvement. A study by Wang and Houchins (2019) found that immigrant parents faced unique challenges in navigating the education system and may require additional support and resources to become involved in their children's education. Overall, the theory of parental involvement suggests that parental involvement is a crucial component of children's academic success and well-being. It highlights the importance of a collaborative home-school partnership, the positive impact of parental involvement on children's motivation and attitudes toward learning, the need for age-appropriate and culturally responsive approaches to parental involvement, and the potential benefits of involving parents from diverse backgrounds. Several studies have explored the association between parental involvement and learners' numerical achievement. For exam-

ple, Hill and Tyson (2019) conducted a meta-analysis of research on parental involvement in middle school, finding that parental involvement strategies specifically focused on mathematics education were associated with more extraordinary numerical achievement. Additionally, Jeynes (2018) conducted a meta-analysis of different types of parental involvement programs for urban students, concluding that these programs effectively improved students' mathematics achievement. These findings are consistent with the broader theoretical framework that emphasizes the importance of parental involvement in supporting children's numerical learning. According to the National Council of Teachers of Mathematics (NCTM), parental involvement can take many forms, including helping children with homework, participating in school events, and discussing mathematics concepts (as cited in Fan Chen, 2020). This collaborative approach between parents and educators can help foster a positive learning environment for children, enhancing their mathematical skills and knowledge. Moreover, parental involvement has been found to positively impact children's motivation to learn mathematics. In their meta-analysis of parental involvement and academic motivation, Fan and Chen (2020) found that parental involvement was associated with higher levels of academic motivation among children, predicting greater academic achievement. This suggests that parental involvement can enhance children's mathematical skills and their broader attitudes towards learning. In conclusion, the theory of parental involvement is closely associated with the theory of learners' numerical achievement. Research has consistently demonstrated that parental involvement can positively impact children's numerical achievement, motivation, and attitudes toward learning. As such, educators and policymakers should recognize the importance of parental involvement in mathematics education and work to develop strategies that engage parents as partners in their chil-

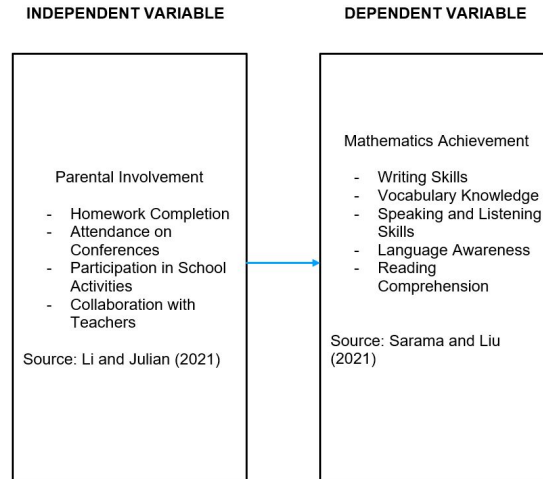


Fig. 1. Conceptual Framework of the Study

dren’s learning. By fostering a collaborative and supportive learning environment, parents and educators can help promote the development of strong mathematical skills and positive attitudes towards mathematics among learners. Figure 1 explains the assumed association between parental involvement and learners’ mathematics achievement.

The independent variable of parental involvement has the following indicators: homework completion, attendance to conferences, participation in school activities, and collaboration with teachers, while the dependent variable of learners’ mathematics achievement has the following indicators: attendance in class, classroom participation, performance tasks, and written tasks. The theory of parental involvement was a well-established concept in education that recognized parents’ vital role in their children’s academic success. Parental involvement has

been linked to a range of positive outcomes, including higher levels of educational achievement, improved attitudes toward school, and greater motivation to learn (Fan Chen, 2020).

1.3. Statement of the Problem—The study was purposely conducted to determine the extent of parental involvement and its association with elementary learners’ mathematics achievement in Malita West District, Davao Occidental Schools Division. This specifically sought to answer the following statement of the problem:

- (1) What is the extent of parental involvement in terms of;
 - (1) homework completion;
 - (2) attendance to the conference;
 - (3) participation in school activities, and
 - (4) collaboration with teachers?
- (2) What is the extent of learners’ mathematics achievement in terms of;
 - (1) attendance in class;
 - (2) classroom participation;
 - (3) performance tasks; and
 - (4) written tasks?
- (3) Is there a significant relationship between parental involvement and learners’ mathematics achievement?

- (4) Which of the parental involvement domains significantly influence learners' mathematics achievement?

1.4. Hypothesis—To provide empirical evidence given the posed theoretical and conceptual frameworks as claimed by the study, null hypotheses were tested at 0.05 alpha level of significance, stating: Ho 1: No significant relationship exists between parental involvement and learners' mathematics achievement. and, Ho 2: None of the domains of parental involvement significantly influence learners' mathematics achievement. This proposed study entitled *Extent of Parental Involvement and Learners' Mathematics Achievement* would benefit various stakeholders. Results would be of significance to the following: School Principal and Administrators. The study highlights the importance of parental involvement in improving learners' mathematics achievement. As such, school principals can use the study's findings to encourage parents to actively participate in their children's education, particularly in mathematics. The study also identifies effective parental involvement strategies to improve learners' mathematics achievement. School principals can use these strategies to design programs and initiatives that encourage and support parental involvement. As school principals are responsible for ensuring their students' academic success, the study provides them with insights into how they could enhance learners' mathematics achievement through parental involvement. The study's findings could help school principals align their efforts with these goals and develop action plans that support the achievement of these targets. Teachers. The study emphasizes the importance of parental involvement in improving learners' mathematics achievement. Teachers could use the study's findings to collaborate with parents and work together to support their student's academic success. The study highlights the importance of involving parents in students' mathematics learning. Teachers could use this information to create learning opportunities that include parents and extend learning beyond the classroom. Teachers are responsible for meeting the individual learning needs of their students. The study's findings can help teachers understand how parental involvement can support their efforts to meet the diverse learning needs of their students. The study emphasizes the role of parental involvement in promoting student motivation and engagement in mathematics learning. Teachers could use this information to develop strategies that enhance student motivation and foster a love of learning. Overall, the study provides valuable insights that can help teachers improve learners' mathematics achievement and support their efforts to meet the individual learning needs of their students. It also highlights the importance of involving parents in the learning process and provides teachers with strategies to collaborate with parents to enhance student learning. Future Researchers. The study provides a framework for future research on the relationship between parental involvement and learners' mathematics achievement. Future researchers can use the study's methods and findings to design their research studies and investigations. The study must identify gaps in the existing research on parental involvement and learners' mathematics achievement. Future researchers can use this information to design studies that address these gaps and contribute to the knowledge base in the field. The study contributes to the knowledge of the relationship between parental involvement and learners' mathematics achievement. Future researchers could build on this knowledge by conducting more in-depth studies investigating the mechanisms underlying this relationship and the factors influencing it. The study identifies effective parental involvement strategies to improve

learners' mathematics achievement. Future researchers could use this information to design interventions that promote parental involvement and support learners' academic success. The study has implications for policy and practice related to parental involvement and education. Future researchers could use the study's findings to inform policy decisions and educational practices that support learners' mathematics achievement. This study defined the terms conceptually and operationally to better understand and reference them when discussing results in the preceding chapters. Parental Involvement. Parental involvement in elementary learners' mathematics achievement refers to the extent to which parents or guardians participate in and support their children's learning of mathematical concepts and skills. Parents can help their children with math homework, review math concepts and skills, and encourage practice through games and activities. Parents can establish communication with their children's math teachers to stay informed about their child's progress, seek guidance, and discuss any concerns or issues related to their child's math education. Parents can help foster positive attitudes towards

math by encouraging their children to enjoy math, praising their efforts and achievements, and demonstrating the importance of math in everyday life. In this study, the term is used as the independent variable. It is measured in homework completion, conference attendance, school activity participation, and teacher collaboration. Elementary Learners' Numerical Achievement. Elementary learners' numerical achievement refers to the level of proficiency and understanding of mathematical concepts, skills, and knowledge that students in elementary school have acquired. This includes number sense, operations, geometry, measurement, algebra, and data analysis. Elementary learners' numerical achievement is often assessed through standardized tests, measures, teacher observations, and evaluations. Therefore, elementary learners need to develop a solid foundation in mathematics to prepare them for future academic and professional pursuits. In this study, the term is used as the dependent variable, measured in terms of attendance in class, classroom participation, performance tasks, and written tasks.

2. Methodology

In this chapter, we will outline the processes and steps involved in conducting the study. This will encompass selecting the study's design, identifying the respondents and the sampling method, choosing the research instruments for data collection, and delineating the data analysis process. The researcher employed artificial intelligence methods to meticulously proofread this work during its preparation. Artificial Intelligence (AI) was expressly utilized to enhance the overall quality, coherence, and precision of the manuscript. This methodology is being openly communicated to adhere to ethical norms in research. Leveraging AI for proofreading underscores a commitment to the responsible use of cutting-edge technologies and acknowledges AI's growing role and potential in professional and academic writing.

2.1. Research Design—This study used a non-experimental descriptive-correlational and predictive research design. A non-experimental research design refers to a type of research methodology in which the researcher does not

manipulate or control the independent variable(s). Instead, the researcher observes and measures the variables of interest without intervening or altering them. Non-experimental research was used when it was not feasible or

ethical to manipulate the independent variable or when the research question requires examining naturally occurring phenomena (Gallagher, 2010). Some examples of non-experimental research designs include descriptive, correlational, and observational research. These designs often investigate relationships between variables, describe phenomena, or make predictions. Non-experimental research could be conducted using quantitative and qualitative methods, and data could be collected through various means such as surveys, interviews, and observation (Bridges Disney, 2010). Descriptive-correlational research designs were used to describe the relationships between variables. Researchers collect data on two or more variables and then analyze the data to determine if there is a relationship between them. This type of research is used to generate hypotheses for future studies (Campbell Stanley, 1963). Moreover, a descriptive-correlational research design could help generate hypotheses and identify potential causal relationships between variables. By examining the strength and direction of correlations between variables, researchers could gain insight into how changes in one variable might be associated with changes in another. This can provide a basis for developing theories about the underlying mechanisms that drive the relationship between variables, which could be tested using more rigorous experimental or quasi-experimental designs. Finally, a descriptive-correlational research design could be valuable when experimental manipulation of variables is not possible or ethical. For example, manipulating variables such as age, gender, or medical condition to examine their effects on other variables may be unethical. In such cases, a descriptive-correlational design can provide a valuable alternative for investigating the relationships between variables of interest without requiring manipulation or control of those variables. Non-experimental research design was valuable for investigating the

relationship between variables without manipulating or controlling them. In the context of parental involvement and learners' mathematics achievement, a non-experimental research design can explore how much parental involvement relates to learners' mathematics performance. One non-experimental research design that could be used to study parental involvement and learners' mathematics achievement is correlational research. Correlational research examines the relationship between two or more variables without manipulating them. Regarding parental participation and learners' mathematics achievement, researchers could collect data on parental involvement in their child's mathematics education and their child's mathematics achievement scores. The researcher could then analyze the data to determine if there was a significant relationship between parental involvement and mathematics achievement.

2.2. *Research Respondents*—The study's respondents were elementary school teachers in Malita, West District, and Davao Occidental Schools Division. He used the Raosoft sample size calculator, where 120 respondents were randomly selected in the Malita, West District Davao Occidental Schools. One randomly determined, the respondents were informed through online platforms and face-to-face considering the availability of the Wifi Connections; they were likewise oriented about the purpose and importance of the study and its contribution to their professional development status. These teacher-respondents were the teachers who handled tasks such as teaching Elementary Mathematics subjects. Moreover, teachers were skilled in strategizing the simplification of mathematics competencies and likewise trying to improve the system in tracking learners' numerical proficiency performance and their competence in responding to the queries of the study. They are qualified for the role and are expected to have performed and contributed to improving the schools and the learners' awareness and ed-

educational stages given the new regular learning system during SY 2022-2023. Further, they have frequently engaged in various seminars and trainings, including SLAC sessions on the pedagogies in integrating pedagogical skills in journalism and the school management and curriculum development delivery system. Moreover, assumptions in the respective schedule of classes during data collection were explicitly discussed with the respondents, and even observance of health protocol was strictly implemented based on Executive Order 31 S 2020 to avoid possible and lower the risk of contamination.

2.3. *Research Instrument*—This research study used the adapted instrument from reviewed literature and related studies. The researcher took time gathering and reading reviews of related literature to develop concepts for the content that support the instrument and its corresponding strands in articulating the set of question items, reducing threats to validity.

The authors argued that items were adapted from the reviewed literature. The survey questionnaire had two parts, one of which determined the extent of parental involvement in homework completion, attendance at conferences, participation in school activities, and collaboration with teachers. Likewise, the second part of the survey measured the extent of learners’ mathematical achievement in terms of class attendance, classroom participation, performance tasks, and written tasks. Further, the survey statements were subjected to a test-retest or validity and reliability testing using Cronbach Alpha at a .05 confidence level. They generated an alpha Cronbach of 0.886, meaning there is an 88.6 percent trust in the validity and reliability of the survey statement constructs (Pallant, 2010). The questionnaire used a 5-point Likert scale to determine the extent of effectiveness of learners’ information systems. Scale, descriptive rating, and interpretation are provided below:

Scale	Descriptive Rating	Interpretation
4.20 – 5.00	Very Extensive	The parental involvement is always manifested
3.40 – 4.19	Extensive	The parental involvement is oftentimes manifested
2.60 – 3.39	Moderately Extensive	The parental involvement is sometimes manifested
1.80 – 2.59	Less Extensive	The parental involvement is rarely manifested
1.00 – 1.79	Not Extensive	The parental involvement is not manifested

Meanwhile, to determine the extent of learners’ mathematics achievement, a 5-point Likert

scale was used in this study, as presented below;

2.4. *Data Gathering Procedure*—The preceding statements explain the data-gathering procedure steps that the researcher must comprehensively consider and follow. The statements are based on the policies and guidelines of the Rizal Memorial Colleges and the existing guidelines of DepEd. Permission to conduct the study. The second week of May 2023, the researcher started conceptualizing the the-

sis proposal’s contents and objectives. He then prepares documents such as letter requests in the conduct of the study. The research study adopted the standard procedures of ethics in data collection (Creswell, 2004). On the last week of May and the first week of June 2023, as soon as the research proposal presentation was approved by the panel of members and the dean of the college, the researcher wrote and

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1.00 – 1.79	Not Extensive	The learners’ mathematics achievement is not manifested

sent a letter of permission to the office of the Schools Division Superintendent of Davao Occidental, through the channel and sought permission to collect data and conduct the study within the Elementary schools of Malita West District, Davao Occidental Schools Division. Distribution and retrieval of the questionnaire. In August 2023, the researcher prepared and created a Google sheet form for the online survey collection process, which was sent to the randomly selected respondents via email addresses and to respondents who do not have internet access. Likewise, a prepared hard copy of the survey sheets was given to each of them. Once done, the link was sent, and right away, responses were generated, thus, ready for sorting, analyzing, and interpreting. This activity was done right after the approval of the Schools Division Superintendent to proceed with data gathering, which commenced on the third week of August 2023. Collation and statistical treatment of data. The preliminary analysis results were given to the thesis adviser during the second week of September 2023. For coaching and statistical treatment, the thesis adviser sought the assistance of the graduate school statistician for providing technical discussions in running the data and its interpretations and implications of the study sometime in the fourth week of September 2023 and further deepened the analysis to make more meaning with the interpretations of

results during the second week of October 2023.

2.5. Ethical Considerations—The researcher sought guidance and advice from the thesis adviser. This resulted in proper authorization and consent were obtained from the respondents of the study to ensure that all their rights would be fully protected, specifically in handling the data, however, not limited to: Voluntary Participation. Voluntary participation refers to the people answering questions who have made a free choice to be involved in gathering information. Respondents were not coerced into being involved; the researcher made a point that they must be able to stop the questions or change their minds about being engaged at any time. Further, the participants were asked if they could participate in the research as respondents in data gathering. In this manner, confidence in the responses to the data gathered was high since the manner and behavior of the respondents manifested as voluntary. Privacy and Confidentiality. The principle of confidentiality in ethical research states that the identity of the participants must remain anonymous, and the information they supply must be respected. This means that in this study, the researcher took steps to ensure that research data remains confidential. Respondents are likelier to provide honest responses when their identity was not exposed. The breach of confidentiality was a potential risk when participating in re-

search. To protect participants' confidentiality, the researcher stored the documents or let the respondents sign consent forms in a locked file cabinet and removed personal identifiers from the study documents as soon as possible. The Informed Consent Process. Informed consent was one of the founding principles of research ethics. It intends that human participants can enter research freely (voluntarily) with complete information about what it means to participate and that they consent before entering the research. In this study, informed consent was crucial as it ensures that individuals have an informed choice about participating in a research study. The Rizal Memorial Colleges Graduate Studies Department ensured several regulations and policies stipulate the requirements for obtaining informed consent from research participants. Risks. Moreover, the researcher informed the respondents that their participation in the survey would not bring any foreseeable risks to their health or well-being. Thus, the respondents were informed that if they became upset or distressed due to answering the questions that were part of the researcher's standard battery, they would have helped obtain a referral for the respondent to see a trained professional who could help process these feelings. The researcher shall then make some alternatives to complete the data collection. Benefits. Further, observable benefits of the study were immediately disseminated to the stakeholders. The study's findings generated facts essential for enhancing the students' well-being (Koenig MacMillan, 2004). This served as the basis for educational institutions to pay attention to creating a sound and safe learning environment for the teachers to upgrade their skills in facilitating practical instruction skills in reading to augment learners' literacy development stages across learning processes. Plagiarism. Plagiarism constitutes a breach of academic integrity and represents substandard scholarship. Plagiarism can have a lasting impact on a future

career, regardless of its intentionality. The responsibility to avoid plagiarism belongs to the student or researcher. This study referenced that source to avoid plagiarism and indicate where the original information came from, including developing good research habits, good time management, and taking responsibility for learning. The researcher further took time to paraphrase a source too closely, including a direct quote without quotation marks, copying elements of different sources, and pasting them into a new document. Fabrication. The researcher guaranteed that deceit and conflict of interest provisions were strictly observed. The researcher assured the respondents that the study was done honestly and transparently. Evidence shows that the benefit of misleading the respondents outweighs any potential harm to them (Creswell, 2014). The researcher assisted the respondents satisfactorily and discussed the study's process and outcome. They were given a general idea of what the researcher was investigating and why such a study was conducted. Their role and contribution to the study were promptly explained. Falsification. This study complied with the citation rules set based on the APA 7th edition citation format to avoid misrepresenting work or altering any data gathered in the study (Cohen, 2020). The data and written information were presented in the most accurate way possible. Conflict of Interest. The researcher ensured that conflict of interest (COI) in this study was highly observed (Lotich, 2011). There was no set of conditions for professional judgment concerning primary interest, as the respondents' welfare or the validity of the research tend to be influenced by secondary interests, such as financial or academic gains or any forms of recognition. Deceit. This paper's writings did not utilize any form of untruthfulness to harm anyone, especially the respondents, since all information written was checked and validated by the panel of experts (Lakey Cohen, 2020). Permission from the Organization/Loca-

tion. Before the study, the researcher procured a letter to conduct a study duly signed by the Dean of Graduate School and provided it to the Schools Division Superintendent of Davao Occidental. Then, the reply from the office allowing the researcher to conduct the study was delivered to the school principals where the study was conducted. Authorship. Finally, upon the approval of the final version to be published, the researcher considered for the authorship of the adviser and a few other individuals, such as colleagues who gave substantial contributions to the conception and design of the study or acquisition of data, or analysis and interpretation of data and drafting the manuscript or revising it critically for important intellectual content as co-authors (Lotich, 2011). Respondents could contact the researcher at the mobile number and email address given on the informed consent form if they have questions, concerns, or complaints about the research. The researcher also ensured that the study's benefits would be shared during meetings and conferences with

stakeholders as part of the audience.

2.6. *Data Analysis*—Mean scores and standard deviation were used to address statement problems posed in statement problem number one regarding parental involvement and statement problem number two regarding the extent of learners' mathematics achievement in the West District of Malita, Davao Occidental Schools Division. Pearson Product Moment Correlation Coefficient or Pearson-r was used to determine its strength/direction significant relationship between parental involvement and the learners' mathematics achievement. Simple Linear Regression analysis was used to address statement problem number 4 on the indicators of parental involvement that significantly influence learners' mathematics achievement (Pallant, 2000) and (Gujarati, 2000). All data processing and analysis were performed using Jeffrey's Statistics Amazing Program (JASP) version 0.12.20. When results were yielded, discussions and interpretations followed.

3. Results and Discussion

This chapter deals with presenting, analyzing, and interpreting data gathered. A tabular and textual presentation is presented to make the analysis more meaningful and draw out the implications. This further shows evidence to support the claim posed in the hypothesis.

3.1. *Extent of Parental Involvement*—Fan and Chen (2016) stated that parental involvement refers to parents' activities to support their children's academic performance. These activities may include attending parent-teacher conferences, assisting with homework, and participating in school-related activities. Kremer (2015) suggests that parental involvement can positively impact learners' achievement by improving their motivation, self-esteem, and study habits. In addition, parental involvement can help learners develop better problem-solving and critical-thinking skills. Several studies have also shown that parental involvement is linked

to higher academic performance, better attendance, and increased engagement in extracurricular activities (Xu Corno, 2017; Henderson Mapp, 2015). Parental involvement in education has long been recognized as an essential factor that can significantly influence learners' achievement. According to Epstein (2019), parental involvement refers to the participation of parents in regular, two-way, and meaningful communication involving student academic learning and other school activities. This involvement can take various forms, such as attending parent-teacher conferences, volunteering at school, helping with homework, and

supporting learning at home. Table 1 shows the extent of parental involvement in terms of homework completion. The result is focused on the highest and lowest mean ratings of indicators which are as follows: Encourage your child to complete their math homework every day, and provide a quiet and distraction-free environment for them to work in (4.10) and Celebrate your child’s success and progress in math by praising their efforts and accomplishments, and acknowledging their hard work (3.40) are often manifested, while, Communicate regularly with your child’s math teacher, asking for feedback and suggestions on how you can best support your child’s learning at home (3.12) and Help child stay organized by creating a system for tracking and completing math assignments, such as a homework planner or calendar (3.10) and sometimes manifested. The overall mean rating of 3.34 denotes that campus journalism

participation in homework completion is sometimes manifested and, thus, moderately extensive. Homework is an essential aspect of education that can significantly influence learners’ achievement. It allows students to practice and reinforce what they have learned in class and develop independent study skills. Fan and colleagues (2018) found that parental involvement in homework completion positively predicted academic achievement among Chinese primary school students. The researchers also noted that parental involvement in homework completion significantly impacted achievement for students from low-income families. Similarly, a study by Crespo and colleagues (2019) found that parental monitoring of homework completion positively predicted academic achievement among Latinx middle school students in the United States.

Table 1. Extent of Parental Involvement in Terms of Homework Completion

No	Homework Completion Strategy	Mean	Descriptive Equivalent
1	Encourage child to complete their math homework every day and provide a quiet and distraction-free environment for them to work in	4.10	Extensive
2	Review the child’s math homework with them, checking for accuracy and understanding. Offer help and support where needed	3.00	Moderately Extensive
3	Help a child stay organized by creating a system for tracking and completing math assignments, such as a homework planner or calendar	3.10	Extensive
4	Celebrate your child’s success and progress in math by praising their efforts and accomplishments and acknowledging their hard work	3.40	Extensive
5	Communicate regularly with your child’s math teacher, asking for feedback and suggestions on how you can best support your child’s learning at home	3.12	Moderately Extensive
Overall Mean		3.34	Extensive

This finding is supported by Xu and colleagues (2019) explored the relationship between parental involvement in homework completion and academic achievement among Chi-

nese high school students. The researchers found that parental involvement in homework completion positively affected students’ academic achievement, study habits, and moti-

vation. This is also guided by the study of Lee and colleagues (2022) examined the impact of parental involvement in homework completion on students' academic achievement in South Korea. The researchers found that parental involvement in homework completion positively affected students' academic achievement in mathematics and their academic self-concept. Parental involvement can support students' learning and academic achievement by providing academic support, promoting positive study habits and motivation, and creating a positive learning environment at home. Thus, educators and policymakers must recognize the value of parental involvement in homework completion and work to facilitate and encourage such involvement in schools and communities.

3.2. *Attendance at Conferences*—Table 2 shows the extent of parental involvement in terms of attendance at conferences. The result is focused on the highest and lowest mean ratings of indicators, which are as follows: Attend

parent-teacher conferences and other school events to learn more about child's progress in math, and to discuss strategies for improving their performance (4.10) and Connect with other parents and educators at math-related events to exchange ideas and resources, and to build a community of support for child's education (3.40) are often manifested, and Attend math-focused workshops and seminars to gain knowledge and skills that can be used to support child's learning at home (3.35) is sometimes manifested, while, Encourage child to attend math-related conferences and competitions, and to share their experiences and insights with you (2.20) and Use what you learn at math-related events to create engaging and fun learning activities at home that reinforce child's understanding of mathematical concepts (2.15). The overall mean rating of 3.04 denotes that parental involvement in attendance at conferences is sometimes manifested and, thus, moderately extensive.

Table 2. The Extent of Parental Involvement in Terms of Attendance to Conference

No	Attendance to Conference	Mean	Descriptive Equivalent
1	Attend parent-teacher conferences and other school events to learn more about child's progress in math, and to discuss strategies for improving their performance	4.10	Extensive
2	Attend math-focused workshops and seminars to gain knowledge and skills that can be used to support child's learning at home	3.35	Moderately Extensive
3	Connect with other parents and educators at math-related events to exchange ideas and resources, and to build a community of support for child's education	3.40	Extensive
4	Encourage child to attend math-related conferences and competitions, and to share their experiences and insights with you	2.20	Less Extensive
5	Use what you learn at math-related events to create engaging and fun learning activities at home that reinforce child's understanding of mathematical concepts	2.15	Less Extensive
Overall Mean		3.04	Moderately Extensive

Attending conferences is a one-way parents can become involved in their child's education and contribute to their academic achievement. Jackson and colleagues (2018) examined the impact of parental attendance at teacher conferences on student achievement in mathematics. The researchers found that parental attendance at conferences was associated with higher mathematics scores among students, especially for those who were previously struggling in the subject. Duffield and colleagues (2019) explored the relationship between parental attendance at parent-teacher conferences and student academic achievement in reading. The researchers found that parent-teacher conferences were positively related to academic achievement in reading and that this relationship was partially mediated by student motivation and engagement. Smith and colleagues (2019) investigated the effects of parental attendance at conferences on academic achievement and social-emotional outcomes among low-income children in kindergarten. The researchers found that parental attendance at conferences was positively related to children's academic achievement and social-emotional outcomes, as well as increased parent-teacher communication and involvement. Wang and colleagues (2018) examined the impact of parental involvement in parent-teacher conferences on student achievement in science. The researchers found that parental involvement in conferences was associated with higher science achievement scores among students and greater student motivation and engagement in science. Fan and colleagues (2020) investigated the relationship between parental involvement in parent-teacher conferences and academic achievement among elementary school students. The researchers found that parental attendance at conferences was positively associated with academic achievement, particularly in mathematics and science. Parental conference attendance can facilitate communication between parents and teachers, promote student motiva-

tion and engagement, and increase parental involvement in their child's education. Therefore, educators and policymakers need to recognize the value of parental involvement through conference attendance and work to encourage and facilitate such involvement in schools and communities.

3.3. *Participation In School Activities*—

Table 3 shows the extent of parental involvement in terms of participation in school activities. The result is focused on the highest and lowest mean ratings of indicators which are as follows: Volunteer your time and expertise to help organize and facilitate math-related events and activities at your child's school (4.15) and Use school events and activities as opportunities to reinforce your child's understanding of mathematical concepts, by engaging them in fun and interactive learning experiences (3.50) are often manifested, while, Encourage your child to participate in math-related extracurricular activities, such as math clubs, competitions, and academic games (3.30), Attend and support school events that celebrate math, such as math fairs, contests, and presentations (3.15) and Work with your child's math teacher and other parents to create and promote math-focused initiatives and programs that enhance the learning environment at your child's school (3.10) are sometimes manifested. The overall mean rating of 3.44 denotes parental involvement in school activity, which is often manifested and, thus, extensive. Parental involvement in their children's education is key to promoting academic success. One-way parents can become involved is by participating in school activities. A study by Turner and colleagues (2018) examined the relationship between parental involvement in school events and children's academic achievement in elementary school. The study found that children whose parents were involved in school activities had higher academic achievement scores than those without.

Table 3. The Extent of Parental Involvement in Terms of Participation in School Activity

No	Participation in School Activity	Mean	Descriptive Equivalent
1	Encourage your child to participate in math-related extracurricular activities, such as math clubs, competitions, and academic games	3.30	Moderately Extensive
2	Attend and support school events that celebrate math, such as math fairs, contests, and presentations	3.15	Moderately Extensive
3	Volunteer your time and expertise to help organize and facilitate math-related events and activities at your child’s school	4.15	Extensive
4	Use school events and activities as opportunities to reinforce your child’s understanding of mathematical concepts, by engaging them in fun and interactive learning experiences	3.50	Extensive
5	Work with your child’s math teacher and other parents to create and promote math-focused initiatives and programs that enhance the learning environment at your child’s school	3.10	Moderately Extensive
Overall Mean		3.44	Extensive

Park and Kim (2019) investigated the impact of parental involvement in school activities on middle school student’s academic achievement. The researchers found that parental involvement in school activities was positively associated with academic achievement in math and science but not in English or social studies. The study also revealed that parents’ level of involvement in school activities varied by socio-economic status, with parents from lower socio-economic backgrounds being less likely to participate. Villegas-Reimers and colleagues (2020) investigated the relationship between parental involvement in school activities and the academic achievement of primary school students in Chile. The study found that parental involvement in school activities was positively associated with math, language, and science academic achievement. According to a study by Wang et al. (2021), parental involvement in school activities has a positive effect on academic achievement, especially for students from

low-income families. The authors found that when parents participate in school activities, they have better communication with teachers and a better understanding of their children’s educational progress, ultimately leading to better academic outcomes for their children. When parents participate in school activities, they become more involved in their children’s education, leading to better communication with teachers, a better understanding of their children’s educational progress, and a supportive home environment that complements what is happening in the classroom. These factors ultimately lead to improved academic performance and more positive attitudes towards learning.

3.4. *Collaboration With Teachers*—Table 4 shows the extent of parental involvement in terms of collaboration with teachers. The result is focused on the highest and lowest mean ratings of indicators which are as follows: Participate in parent-teacher conferences and other meetings to discuss your child’s progress in

math, and to collaborate on a plan for improving their performance (4.25) and Establish open and regular communication with your child's math teacher, to stay informed about your child's progress and areas of challenge in math (4.20) are always manifested, while, Work with your child's teacher to identify specific math skills and concepts that your child needs extra support with, and to develop strategies for addressing those areas of challenge (3.25), Volunteer your time and expertise to support math learning in the classroom, by helping with small group instruction, organizing math games or activities, or providing additional resources or materials (3.20) and Provide feedback to your child's math teacher about the effectiveness of different math learning strategies and approaches, and collaborate on adjustments or modifications as needed (3.15) are sometimes manifested. The overall mean rating of 3.61 denotes that parental involvement in teacher collaboration is often manifested and, thus, extensive. Research has consistently shown that parental collaboration with teachers positively impacts students' academic achievement. For example, a study by Chen and Gregory (2018) found that when parents and teachers work together, students have higher levels of academic achievement, better attendance, and fewer behavior problems. The authors suggested that this positive impact is

3.5. Summarizes The Extent of Parental Involvement—Table 5 summarizes the extent of parental involvement. The result is focused on the highest and lowest mean ratings of indicators, which are as follows: collaboration with teachers (3.61) and participation in school ac-

Parental involvement in their child's education is essential to academic success. Parents can help their children complete homework by providing a quiet and organized space for

due to improved communication between parents and teachers, leading to better support for students both in and out of the classroom. Wang and Hsiao (2019) found that parental collaboration with teachers is positively associated with student's academic motivation and achievement. The authors found that when parents collaborate with teachers, they provide additional support to students, which enhances their learning experiences and helps to reinforce academic skills. They also found that students who experience high parental collaboration with teachers are more likely to take responsibility for their learning, leading to increased academic achievement. Wang, Hill, Hofkens, and Samek (2022) examined the effects of parental involvement on student's academic achievement in secondary schools. The authors found that when parents collaborate with teachers, it leads to higher levels of academic achievement among students and better attendance and behavior. When parents and teachers work together, they can create a supportive learning environment, improving academic achievement, attendance, behavior, problem-solving skills, and language development. As such, schools should encourage and facilitate parental collaboration with teachers as part of their efforts to improve student outcomes.

tivities (3.44) are often manifested. In contrast, homework completion (3.34) and conference attendance (3.04) are sometimes manifested. The overall mean rating of 3.35 denotes that parental involvement is sometimes manifested and, thus, moderately extensive.

them to work, helping them with difficult assignments, and monitoring their progress. Parents can also communicate with teachers to understand the expectations for homework and how

Table 4. The extent of Parental Involvement in Terms of Collaboration with Teachers

No	Collaboration with Teachers	Mean	Descriptive Equivalent
1	Establish open and regular communication with your child’s math teacher to stay informed about your child’s progress and areas of challenge in math	4.20	Very Extensive
2	Work with your child’s teacher to identify specific math skills and concepts that your child needs extra support with and to develop strategies for addressing those areas of challenge	3.25	Moderately Extensive
3	Participate in parent-teacher conferences and other meetings to discuss your child’s progress in math and to collaborate on a plan for improving their performance	4.25	Very Extensive
4	Volunteer your time and expertise to support math learning in the classroom by helping with small group instruction, organizing math games or activities, or providing additional resources or materials	3.20	Moderately Extensive
5	Provide feedback to your child’s math teacher about the effectiveness of different math learning strategies and approaches, and collaborate on adjustments or modifications as needed	3.15	Moderately Extensive
Overall Mean		3.61	Extensive

Table 5. Summary of the Extent of Parental Involvement

No	Campus Journalism Participation	Mean	Descriptive Equivalent
1	Homework Completion	3.34	Moderately Extensive
2	Attendance to Conference	3.04	Moderately Extensive
3	Participation in School Activities	3.44	Extensive
4	Collaboration with Teachers	3.61	Extensive
Overall Mean		3.35	Moderately Extensive

they can best support their children at home. Parent-teacher conferences are an excellent opportunity for parents to learn more about their child's academic progress and areas of improvement. By attending these conferences, parents can collaborate with teachers to identify strategies to support their child's learning and development. Parents can participate in school activities by volunteering to chaperone field trips, attending school events, and joining parent-teacher associations. This involvement can help parents stay connected to the school community and build positive relationships with teachers and other parents. Collaboration between parents and teachers is critical for ensuring students receive the support they need to succeed. This can include regular communication about academic progress, sharing information about the student's strengths and weaknesses, and working together to develop strategies to address any challenges.

3.5.1. Extent of Learners' Numerical Achievement—One study by Zhang et al. (2018) investigated the relationship between parental involvement and the achievement of elementary school students in China. The study found that parental involvement, including monitoring homework, attending parent-teacher conferences, and engaging in home-based mathematics activities, was positively associated with mathematics achievement. Another study by Anjum et al. (2018) in Pakistan found that parental involvement in mathematics learning

A study conducted by Acar and Tarhan (2019) found a significant relationship between mathematics achievement and class attendance. The study involved 110 high school students in Turkey, and the results showed that students who attended mathematics classes regularly had higher achievement scores than those who missed classes. Islam and Islam (2019) examined the relationship between class attendance

through providing resources and supporting children in their homework significantly impacted students' mathematics achievement.

3.6. Attendance In Class—Table 6 shows the extent of learners' numerical achievement in terms of attendance in class. The result is focused on the highest and lowest mean ratings of indicators which are as follows: By attending math class, learners can develop a sense of accountability and responsibility for their learning, leading to more significant achievement in the subject (3.50), Regular attendance in math class can help learners stay on top of the coursework and better manage their time (3.45) and Attending math class provides learners with the opportunity to ask questions and receive feedback on their work (3.40) are often manifested, while, Consistently attending math class is crucial to achieving success in the subject (3.30) and Attendance in math class allows learners to engage with their peers and teacher, leading to a deeper understanding of the material (3.00) are sometimes manifested. The overall mean rating of 3.33 denotes that learners' numerical achievement in terms of attendance in class is sometimes manifested and, thus, moderately extensive. Class attendance is essential in determining learners' academic performance, especially in subjects like mathematics. Mathematics is considered one of the most challenging subjects in school, and learners who miss classes are more likely to struggle.

and mathematics achievement among undergraduate students in Bangladesh. The study involved 150 students, and the results showed that students who attended mathematics classes regularly had significantly higher achievement scores than those who missed classes. A study by Li and Li (2022) investigated the relationship between class attendance and the mathematics achievement of college students in China. The

Table 6. The extent of learners’ numerical achievement in terms of attendance in class

No	Attendance in Class	Mean	Descriptive Equivalent
1	Consistently attending math class is crucial to achieving success in the subject	3.30	Moderately Extensive
2	Attendance in math class allows learners to engage with their peers and teacher, leading to a deeper understanding of the material	3.00	Moderately Extensive
3	Regular attendance in math class can help learners stay on top of the coursework and better manage their time	3.45	Extensive
4	Attending math class provides learners with the opportunity to ask questions and receive feedback on their work	3.40	Extensive
5	By attending math class, learners can develop a sense of accountability and responsibility for their learning, leading to greater achievement in the subject	3.50	Extensive
Overall Mean		3.33	Moderately Extensive

study found that students who attended mathematics classes regularly scored significantly higher on mathematics exams than those who did not. The authors attributed this relationship to regular class attendance, which provided students with more opportunities to interact with their teachers and peers, receive feedback, and clarify their doubts. Kim and Choi (2022) examined the impact of class attendance on the mathematics achievement of Korean middle school students. The study found that students who attended mathematics classes regularly had higher mathematics achievement scores than those who did not. Regular attendance in mathematics classes gives learners more opportunities to learn and practice mathematical concepts, receive teacher feedback, and support, and clarify their doubts. Studies discussed in this essay have shown that students who attend classes regularly tend to perform better in mathematics than those who do not.

3.7. *Classroom Participation*—Table 7 shows the extent of learners’ numerical achieve-

ment regarding classroom participation. The result is focused on the highest and lowest mean ratings of indicators which are as follows: Regular participation in math class can boost learners’ confidence in their abilities and help them overcome math anxiety (3.45) is often manifested; teachers can assess learners’ understanding of mathematical concepts through their class participation, leading to personalized feedback and support for their learning needs (3.25) and Actively participating in class discussions and activities can enhance learners’ understanding of mathematical concepts (3.20) are sometimes manifested, while, Classroom participation encourages learners to develop critical thinking skills by challenging them to explain their thought processes and reasoning behind solutions (2.40) is rarely manifested. The overall mean rating of 2.95 denotes that learners’ numerical achievement in classroom participation is rarely manifested and, thus, less extensive.

Table 7. The extent of learners’ numerical achievement in terms of classroom participation

No	Classroom Participation	Mean	Descriptive Equivalent
1	Actively participating in class discussions and activities can enhance learners’ understanding of mathematical concepts	3.20	Moderately Extensive
2	Classroom participation encourages learners to develop critical thinking skills by challenging them to explain their thought processes and reasoning behind solutions	2.40	Less Extensive
3	Engaging in group activities and projects can enhance learners’ problem-solving skills and foster collaboration and teamwork	2.45	Less Extensive
4	Regular participation in math class can boost learners’ confidence in their abilities and help them overcome math anxiety	3.45	Extensive
5	Teachers can assess learners’ understanding of mathematical concepts through their participation in class, leading to personalized feedback and support for their learning needs	3.25	Moderately Extensive
Overall Mean		2.95	Moderately Extensive

Mathematics is an essential subject that enables learners to develop critical thinking skills and problem-solving strategies. It requires learners’ active involvement in class discussions and participation in various activities to foster a deep understanding of mathematical concepts. One way to promote active learning in the classroom is through class participation. Class participation is a critical aspect of learning, especially in mathematics, as it enables learners to engage in the learning process actively. According to Lindqvist and Bergbom (2018), class participation can positively impact learners’ mathematics achievement. The study found that learners who participated actively in class discussions worked collaboratively with their peers, and engaged in problem-solving activities scored significantly higher on mathematics assessments than those who did not participate actively in class. Zhang and Li (2021) investigated the relationship between class participation and mathematics achievement of Chinese middle school students. The authors found a significant positive correlation between class participation and

mathematics achievement. They also found that students who participated more in class had better problem-solving skills and were likelier to ask questions and seek clarification. A similar study by Alhija and Abu-Qabaa (2022) investigated the relationship between class participation and mathematics achievement of Palestinian high school students. The authors found that students who participated more in class had higher mathematics achievement than those who did not. Recent studies have consistently shown a positive correlation between class participation and mathematics achievement, suggesting that students who participate more in class tend to have better mathematics skills and are more engaged in the learning process. These findings underscore the need for educators to create a classroom environment that encourages active student participation and fosters a love for mathematics.

3.8. *Performance Tasks*—Table 8 shows the extent of learners’ numerical achievement in terms of performance tasks. The result is focused on the highest and lowest mean ratings of

indicators which are as follows: Performance tasks can be used to differentiate instruction and provide opportunities for learners to work at their own pace and level of challenge (4.40) is always manifested, while, Performance tasks in mathematics allow learners to apply their knowledge and skills to real-world situations, providing a more authentic assessment of their understanding (3.50) and Performance tasks can help learners develop problem-solving and criti-

cal thinking skills, which are essential for success in math and beyond (3.40) are often manifested, and Completing performance tasks requires learners to demonstrate their ability to analyze data, make inferences, and communicate their findings effectively (3.35) is sometimes manifested. The overall mean rating of 3.59 denotes that learners' numerical achievement in performance tasks is often manifested and, thus, extensive.

Table 8. The extent of learners' numerical achievement in terms of performance tasks

No	Performance Tasks	Mean	Descriptive Equivalent
1	Performance tasks in mathematics allow learners to apply their knowledge and skills to real-world situations, providing a more authentic assessment of their understanding	3.50	Extensive
2	Performance tasks can help learners develop problem-solving and critical thinking skills, which are essential for success in math and beyond	3.40	Extensive
3	Completing performance tasks requires learners to demonstrate their ability to analyze data, make inferences, and communicate their findings effectively	3.35	Moderately Extensive
4	Performance tasks can be used to differentiate instruction and provide opportunities for learners to work at their own pace and level of challenge	4.40	Very Extensive
5	Feedback on performance tasks can be used to guide learners' future learning and provide personalized support to address areas of weakness	3.24	Moderately Extensive
Overall Mean		3.59	Extensive

Performance tasks are practical in assessing mathematics achievement. According to Nguyen et al. (2019), performance tasks provide a more authentic assessment of students' mathematics knowledge and skills than traditional assessments. Performance tasks require students to apply their knowledge and skills in a real-world context, which can increase their motivation and engagement with the subject matter (Chen et al., 2020). Research has also shown that performance tasks can improve stu-

dents' mathematics achievement. In a study by Li et al. (2018), middle school students who participated in a performance task-based curriculum showed significant gains in mathematics achievement compared to students who received traditional instruction. Another study by Zhang et al. (2020) found that performance tasks improved students' mathematical reasoning and problem-solving skills. Performance tasks can also help identify students who are struggling with mathematics. According to Lee

et al. (2018), performance tasks can provide a more accurate assessment of students' understanding of mathematics concepts than traditional assessments. Performance tasks can help identify students who may be struggling with concepts or skills, allowing teachers to provide targeted interventions and support. Performance tasks provide a more authentic assessment of students' mathematics knowledge and skills. They can also improve students' motivation and engagement with the subject matter. Performance tasks can also help identify students struggling with mathematics and provide targeted interventions and support.

3.9. *Written Tasks*—Table 9 shows the extent of learners' numerical achievement in terms of written tasks. The result is focused on the highest and lowest mean ratings of indicators which are as follows: Completing written tasks

can help learners develop communication skills and learn how to explain mathematical concepts and reasoning clearly and concisely (4.50) and Feedback on written tasks can be used to guide learners' future learning and provide personalized support to address areas of weakness (4.20) are often manifested; Written tasks can be used to assess learners' understanding of mathematical concepts and identify areas of weakness that require additional support (3.15), Written tasks allow learners to organize their thoughts and ideas, leading to a deeper understanding of the material (3.10) and Written tasks in mathematics, such as problem sets or essays, provide learners with opportunities to practice and reinforce mathematical concepts and skills (3.10). The overall mean rating of 3.59 denotes that learners' numerical achievement in written tasks is often manifested as extensive.

Table 9. The extent of learners' numerical achievement in terms of written tasks

No	Written Tasks	Mean	Descriptive Equivalent
1	Written tasks in mathematics, such as problem sets or essays, provide learners with opportunities to practice and reinforce mathematical concepts and skills	3.00	Moderately Extensive
2	Written tasks allow learners to organize their thoughts and ideas, leading to a deeper understanding of the material	3.10	Moderately Extensive
3	Completing written tasks can help learners develop communication skills and learn how to explain mathematical concepts and reasoning clearly and concisely	4.50	Extensive
4	Written tasks can be used to assess learners' understanding of mathematical concepts and identify areas of weakness that require additional support	3.15	Moderately Extensive
5	Feedback on written tasks can be used to guide learners' future learning and provide personalized support to address areas of weakness	4.20	Extensive
Overall Mean		3.59	Extensive

Recent research has focused on the effectiveness of written tasks in mathematics education. Written tasks are an effective assess-

ment tool in evaluating students' knowledge and skills in mathematics. In a study by Liu and Hu (2019), written tasks were an effective

way to assess students’ problem-solving skills. The study involved the development and implementation of a problem-solving assessment task. Written tasks can also help students develop mathematical reasoning and critical thinking skills. According to a study by Huang et al. (2018), written tasks can help students develop a deeper understanding of mathematical concepts by encouraging them to think critically about the concepts and apply them in different contexts. The study found that written tasks can help improve students’ mathematical reasoning and problem-solving abilities. According to a study by Voskoglou et al. (2017), written tasks can accurately assess students’ mathematical knowledge and skills. This can help teachers identify students who may be struggling with concepts or skills, which can allow for targeted interventions and support. Lai and Lee (2021), the authors investigated the effect of written reflection tasks on mathematical problem-solving and metacognitive skills. The study involved

70 Hong Kong secondary school students, randomly assigned to either a written reflection or a control group. The results showed that the students who completed the written reflection tasks outperformed the control group in problem-solving and metacognitive skills, indicating that written reflection tasks can effectively improve students’ mathematical achievement.

3.10. *Summarizes The Extent of Learners’ Numerical Achievement*—Table 10 summarizes the extent of learners’ numerical achievement. The result is focused on the highest and lowest mean ratings of indicators, which are as follows: performance tasks (3.50) and written tasks (3.59) are often manifested, while attendance in class (3.33) and classroom participation (2.95) are moderately manifested. The overall mean rating of 3.36 denotes that learners’ numerical achievement is moderately manifested and, thus, moderately extensive.

Table 10. Summary of the Extent of Learners’ Numerical Achievement

No	Learners’ Numerical Achievement	Mean	Descriptive Equivalent
1	Attendance in Class	3.33	Moderately Extensive
2	Classroom Participation	2.95	Moderately Extensive
3	Performance Tasks	3.59	Extensive
4	Written Tasks	3.59	Extensive
Overall Mean		3.36	Moderately Extensive

3.11. *Relationship Between Parental Involvement and Learners’ Numerical Achievement*—It can be depicted that Pearson’s Correlation generated a significant correlation between parental involvement ($r=0.859$; $p<.001$) and numerical achievement. Table 11 revealed a

significant correlation between parental involvement and learners’ numerical achievement. It provides information that the null hypothesis stating that there is no significant correlation must be rejected, for it provided empirical evidence of significant results.

3.12. *On the Domains of Parental Involvement Significantly Influence Learners’ Numerical Achievement*—Table 12 depicts the simple regression coefficient analysis on the domains

of parental involvement that significantly influence learners’ numerical achievement. Domains of parental involvement, in terms of homework completion (0.002), attendance at

Table 11. Significant Relationship Between Parental Involvement and Learners' Numerical Achievement

Variables	r-value	p-value	Parental Involvement	
			Interpretation	Decision
Numerical Achievement	0.859	<0.001	Significant	Reject H0

Note. *Significant at $p < 0.05$.

conferences (0.002), participation in school activities (0.002), and collaboration with teachers (0.002), significantly influence learners' numerical achievement.

Table 12. Regression Analysis Results

Model	B	Beta	Standard Error	p-value	Decision
H					
(Intercept)	4.145	0.079	60.416	0.001	4.145
H					
(Intercept)	0.213	0.175	1.076	0.280	0.201
Homework Completion	0.807	0.107	0.102	1.010	0.315
*Reject H0					
Attendance to Conference	0.441	0.108	0.136	1.299	0.196
*Reject H0					
Participation in School-activities	0.202	0.097	0.210	2.098	0.038
*Reject H0					
Collaboration with Teachers	0.683	0.086	0.499	5.654	0.001
*Reject H0					
Model Summary					
R ²	0.855				
F-value	226.897				
p-value	<0.001				

Note. *Significant at $p < 0.05$.

Meanwhile, the R² value of 0.855 suggests that the domains of parental involvement explained 85.5 percent of the variance of learners' numerical achievement. This provides empirical evidence that the domains of parental involvement can account for and explain the variability of learners' numerical achievement.

In addition, the F-value shows all the sums of squares, with regression being the model and Residual being the error. The F-value (226.897) and F-statistic are significant $p < .001$, which indicates that the model better predicts learners' numerical achievement.

4. Conclusions and Recommendations

This chapter presents the findings, conclusion, and recommendation based on the results of the data analyzed, discussed, and drawn implications. Findings are based on the posed statement of the problem; conclusions were based on the findings generated, and recommendations are based on the implications of the discussions.

4.1. *Findings*—The following were the study's findings, as shown in the presentation results, analysis, and discussions. The extent of parental involvement in terms of collaboration with teachers (3.61) and participation in school activities (3.44) was often manifested, while homework completion (3.34) and attendance at conferences (3.04) were sometimes manifested. The overall mean rating of 3.35 denotes that parental involvement is sometimes manifested and, thus, moderately extensive. The extent of learners' numerical achievement in terms of performance tasks (3.50) and written tasks (3.59) are often manifested, while attendance in class (3.33) and classroom participation (2.95) are moderately manifested. The overall mean rating of 3.36 denotes that learners' numerical achievement is moderately manifested and, thus, moderately extensive.

Pearson's Correlation generated a significant correlation between parental involvement ($r=0.859$; $p<.001$) and numerical achievement. Domains of parental involvement, in terms of homework completion (0.002), attendance at conferences (0.002), participation in school activities (0.002), and collaboration with teachers (0.002), significantly influence learners' numerical achievement.

4.2. *Conclusions*—Given the findings of the study presented, the following were the conclusions to wit; The extent of parental involvement in collaboration with teachers, participation in school activities, homework completion, and attendance at conferences denotes that parental involvement is sometimes manifested; thus, it was moderately extensive. The

extent of learners' numerical achievement in terms of performance tasks, written tasks, attendance in class, and classroom participation denoted moderately extensive. There was a significant correlation between parental involvement and numerical achievement. Domains of parental involvement, such as homework completion, attendance at conferences, participation, and collaboration with teachers, significantly influence learners' numerical achievement.

4.3. *Recommendations*—With the presented conclusions of the study, the following were recommendations to wit; Public School District Supervisor. The district supervisor may encourage and support the intensification of homework completion, participation in school activities, and parent collaboration. They could also provide professional development opportunities to teachers to enhance their knowledge and skills in teaching mathematics. Teachers. Teachers may integrate mathematical and numeracy integration into lesson activities into their classes and provide opportunities for students to practice their language skills through writing articles, conducting interviews, and reporting events. They can also encourage students to participate in mathematics contests and competitions to improve their teaching numeracy skills. Future Researchers: Future researchers may conduct longitudinal studies to investigate the factors affecting the increase of learners' numeracy performance. They can also explore the effectiveness of different teaching strategies and approaches to numeracy skills in promoting learners' computing and analysis skills.

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