

# Strengthening Early Learning: Examining the Role of Parental Involvement in Preschoolers’ Literacy and Numeracy Proficiency

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**ABSTRACT:** This study examined the relationship between parental involvement and the literacy and numeracy skills of preschool learners at Mabolo Elementary School. Employing a descriptive-correlational design, the research aimed to determine whether varying levels of parental engagement were significantly associated with children’s mastery of key domains: alphabet knowledge, phonological awareness, book and print knowledge, number recognition, identifying attributes, and thinking skills. A total of 102 preschool learners and their families participated, selected through purposive sampling. Data collection utilized standardized assessment tools and a validated parental involvement questionnaire, anchored in established frameworks such as those by Epstein (2018) and Castro et al. (2015). Statistical analyses, including frequency counts, weighted means, and Pearson’s correlation coefficient, were conducted to explore potential relationships between parental involvement and learner outcomes. Results revealed that while parental involvement was uniformly high, there was no statistically significant correlation with most literacy and numeracy domains, except for a modest positive relationship with number skills. The findings highlighted that the quality, focus, and context of engagement rather than frequency alone are critical in supporting early learning. In response, the study developed a comprehensive Action Plan emphasizing targeted, skill-specific family activities, enhanced home-school collaboration, and sustainable resource provision. This research underscores the need for intentional and collaborative strategies to optimize early childhood educational outcomes.

**Key words:** Early childhood education, literacy and numeracy skills, parental involvement.



## 1. Introduction

Parental involvement is widely recognized as a vital component in the early development of children’s academic skills, particularly in literacy and numeracy (Ghazali et al., 2021). During the preschool years, children form foundational competencies that strongly influence their future academic trajectories (Gullo & Impellizeri, 2022). Research consistently demonstrates that when parents actively engage in their child’s early education through home activities, school events, or regular communication with teachers children tend to perform better in key skill areas such as reading, counting, and problem-solving (Jeffries, 2012). Understanding how parental participation shapes learners’ literacy and numeracy performance is critical,

especially within a community context where resources may be limited, and home-school partnerships are not yet fully institutionalized.

Parental influence begins at home with exposure to books, storytelling, counting routines, and playful numeracy games (Libertus, 2024). Studies have found that parents' involvement in such activities significantly improves children's alphabet knowledge, phonological awareness, and understanding of print concepts (Napoli & Purpura, 2018). These foundational literacy skills are essential for reading readiness and long-term academic success. Likewise, number sense and the ability to identify attributes and apply logical thinking skills central to numeracy are strengthened when children interact with engaged caregivers. The home environment, therefore, plays a complementary role to the formal curriculum, reinforcing concepts introduced in preschool and encouraging exploration and practice in a safe, familiar setting.

However, the quality and frequency of parental involvement can vary widely based on educational background, socioeconomic status, and attitudes toward schooling. In a study by Sonowal and Maraichelvi (2023), parental educational attainment was a significant predictor of children's early literacy and numeracy performance (Sonowal & Maraichelvi, 2023). Parents who had higher educational levels were more likely to engage in cognitively stimulating interactions and provide resources that promoted skill development. This suggests that strategies to boost involvement at Mabolo Elementary must also address the differing needs and capacities of parents to ensure that all children benefit from meaningful home-school engagement.

Additionally, the type of involvement matters. While attendance at school events is beneficial, home-based learning interactions such as reading books, practicing letters and numbers, and asking children questions that develop critical thinking have been shown to produce stronger academic outcomes (Morgan, 2014). For example, talking about story content during shared reading supports language development, while asking children to group objects or identify patterns fosters numeracy skills. Research by Ghazali et al. (2021) further found that many parents, while enthusiastic, lacked the instructional strategies to support numeracy effectively, highlighting the need for targeted guidance from educators (Ghazali et al., 2021).

Another dimension to consider is language use. A study by Conica, Nixon, and Quigley (2023) emphasized the role of "decontextualized language" talk that extends beyond the here and now in predicting long-term literacy and numeracy gains. Parents who engage their children in conversations involving abstract thinking, predictions, and explanations help enhance both verbal reasoning and problem-solving abilities (Conica et al., 2023). Embedding such language into daily routines discussing story endings, comparing shapes, or estimating quantities can create a cognitively rich environment that supports formal learning in the classroom. These insights are especially relevant for schools seeking to improve parental literacy around child development.

Given the evolving demands of preschool education and the critical importance of early skill acquisition, this research at Mabolo Elementary School seeks to examine the level of parental involvement in school activities and how it relates to learners' literacy and numeracy competencies. Specifically, it evaluates preschoolers' proficiency in alphabet knowledge, phonological awareness, and print concepts for literacy, as well as number identification, attribute recognition, and thinking skills for numeracy. Understanding these relationships will help educators design interventions that foster stronger school-family partnerships, ultimately enhancing student learning outcomes and readiness for future schooling.

## 2. Literature Review

Parental involvement has long been recognized as a significant predictor of children's early academic development, especially in literacy. Numerous studies confirm that when parents engage in home-based learning activities such as reading aloud, identifying letters, and practicing sounds children develop stronger alphabet knowledge, phonological awareness, and print concepts. For instance, Morgan (2014) found that home literacy practices, such as shared book reading and parent-child discussions, were closely linked with gains in receptive vocabulary and letter-word identification in preschool children (Morgan, 2014). Similarly, Jeffries (2012) showed that literacy-focused parental interventions resulted in significant increases in both home-based and school-based parental involvement, suggesting that intentional training can empower parents to meaningfully support early literacy skills (Jeffries, 2012). Beyond quantity, the quality of parent-child interaction especially conversations using decontextualized language has also been linked to improved literacy and vocabulary development during the preschool years (Conica et al., 2023).



In the realm of numeracy, parental involvement similarly plays a crucial role in shaping young children's mathematical thinking. Parents who expose children to number-related concepts such as counting, comparing quantities, or identifying patterns help lay the groundwork for formal numeracy learning. According to Ghazali et al. (2021), Malaysian parents who regularly engaged in numeracy activities, like using numbers during play or household tasks, reported higher numeracy readiness in their children (Ghazali et al., 2021). A similar conclusion was drawn by Napoli and Purpura (2018), who found that a rich home numeracy environment was predictive not only of numeracy outcomes but also of vocabulary development, suggesting strong cross-domain benefits (Napoli & Purpura, 2018). Despite this, some parents may lack confidence in teaching math or fail to recognize the educational value of everyday activities, pointing to the need for more parent-focused interventions. Encouragingly, research by Sonowal and Maraichelvi (2023) showed that even parental education levels significantly influenced children's literacy and numeracy scores, further emphasizing the importance of family-based learning environments (Sonowal & Maraichelvi, 2023).

### 3. Methodology

This study utilized a descriptive-correlational research design to examine the relationship between parental involvement and the literacy and numeracy skills of preschool learners at Mabolo Elementary School for the school year 2024–2025. The descriptive component aimed to quantify the level of parental involvement and the literacy and numeracy competencies of the learners, while the correlational aspect analyzed the strength and direction of the relationship between these variables (Creswell & Creswell, 2018; Fraenkel, Wallen, & Hyun, 2019). The design was appropriate as it allowed the researchers to observe and analyze existing conditions without manipulating variables, thereby ensuring the integrity and authenticity of the data (Best & Kahn, 2016). The study was conducted at Mabolo Elementary School in Cebu City, with a purposive sample of 102 respondents comprising 100 parents and 2 preschool teachers selected based on their direct involvement in preschool education. Two main research instruments were employed: an adapted parental involvement questionnaire based on the framework of Hashim et al. (2018), and the Literacy and Numeracy (LitNum) Assessment Tool developed by the Department of Education (DepEd). The questionnaire evaluated various aspects of parental involvement including school participation, home-based learning support, and teacher communication, using a Likert scale for measurable analysis. Meanwhile, the LitNum tool assessed preschoolers' competencies in alphabet knowledge, phonological awareness, print concepts, number identification, and problem-solving, as aligned with DepEd's Basic Education Learning Continuity Plan. This methodology ensured a reliable, contextualized understanding of how parental engagement influences early academic outcomes.

### 4. Results and Discussion

Table 1 presents the level of parental involvement in school-related activities of preschool learners, as assessed through ten specific indicators. The data reveal an overall aggregate weighted mean of 4.69, with a standard deviation of 0.51, which falls within the "Very High" category based on the provided interpretive scale. Notably, the highest-rated item is "I examine my child's homework" with a weighted mean of 4.95, suggesting a strong parental emphasis on monitoring academic progress. Similarly, other indicators such as ensuring a study schedule (WM = 4.86), providing a quiet learning environment (WM = 4.68), and maintaining open communication about daily activities (WM = 4.85) all show consistent and strong parental engagement. Interestingly, while most items were rated "Very High," only the indicator on sending children to paid tuition (WM = 3.92) received a "High" rating, possibly due to financial constraints. The data suggest that parents are highly proactive in supporting their children's learning, particularly at home, reflecting a strong home-school connection and commitment to academic development.



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**Table 1.** Level of Parent’s Involvement towards the School Activities of the Learners.

S/N	Indicators	WM	SD	Verbal Description
1	I make sure that my child acts in accordance with his/her study schedule and study at home.	4.86	0.35	Very High
2	I make sure that my child has a comfortable space for learning.	4.85	0.36	Very High
3	I always talk to my child about his/her daily activities.	4.85	0.36	Very High
4	I guide my child when performing household chores.	4.82	0.38	Very High
5	I examined my child's homework.	4.95	0.22	Very High
6	I make sure that my child has enough reference books, stationery, and other educational necessities.	4.83	0.37	Very High
7	I make sure that a learning environment with less noise from the television/radio when my child studies his/her lessons.	4.68	0.72	Very High
8	I send my children to extra classes held at school.	4.43	0.81	Very High
9	I send my son to paid tuition.	3.92	1.02	High
10	I always talk with my child about his/her problems.	4.71	0.56	Very High
	Aggregate Weighted Mean	4.69		
	Aggregate Standard Deviation		0.51	Very High

**Table 2.** Level of literacy skills of the learners in terms of Alphabet Knowledge.

Level	f	%
Advanced	95	93.14
Intermediate	6	5.88
Beginner	1	0.98
Total	102	100.00

Table 2 presents the learners’ literacy skill levels in terms of Alphabet Knowledge. The data indicate that the vast majority of learners (93.14%) are at the Advanced level, demonstrating a strong mastery of recognizing, naming, and possibly writing letters. A small percentage, 5.88%, fall under the Intermediate level, suggesting partial proficiency, likely with some inconsistencies in identifying or recalling alphabet letters. Only one learner (0.98%) is classified as a Beginner, indicating minimal recognition or understanding of the alphabet. These results reflect a highly favorable literacy outcome in this domain, which may be attributed to effective parental involvement, home literacy practices, and supportive early learning environments. The high proportion of advanced learners suggests that foundational alphabet knowledge is well-developed among preschoolers at Mabolo Elementary School.

**Table 3.** Level of literacy skills of the learners in terms of Phonological Awareness.

Level	f	%
Advanced	83	81.37
Intermediate	18	17.65
Beginner	1	0.98
Total	102	100.00

Table 3 displays the learners’ literacy skill levels in terms of Phonological Awareness, a key foundational skill for reading development. The data show that a significant majority, 81.37%, of the learners are at the Advanced level, indicating strong abilities in recognizing and manipulating sounds, such as rhyming, segmenting, or identifying beginning and ending sounds. Meanwhile, 17.65% of learners are categorized as Intermediate, suggesting that they have developed some phonological skills but may still require support in certain areas. Only 1 learner (0.98%) is at the Beginner level, reflecting limited phonological awareness.

Overall, these findings suggest that most preschool learners at Mabolo Elementary School are well-prepared in this critical area of literacy, which is essential for decoding and early reading success. The high performance could be linked to both effective classroom instruction and strong parental engagement in literacy activities at home.

**Table 4.** Level of literacy skills of the learners in terms of Book and Print knowledge.

Level	f	%
Advanced	56	54.90
Intermediate	41	40.20
Beginner	5	4.90
Total	102	100.00

Table 4 illustrates the learners’ literacy skill levels in terms of Book and Print Knowledge, which includes understanding how books work, recognizing print conventions, and identifying parts of a book. The results show that 54.90% of the learners are at the Advanced level, indicating that over half of the preschoolers demonstrate strong familiarity with books and printed materials. 40.20% fall into the Intermediate category, suggesting that a significant number of learners are still developing these skills and may occasionally struggle with concepts like reading direction or differentiating between letters and words. Meanwhile, 4.90% of the learners are at the Beginner level, showing minimal understanding of book and print features. Compared to other literacy domains like Alphabet Knowledge and Phonological Awareness, the proficiency in Book and Print Knowledge appears slightly lower. This may imply a need for increased exposure to print-rich environments both at school and at home, as well as more guided reading sessions to reinforce these concepts.

**Table 5.** Level of numeracy skills of the learners in terms of Numbers.

Level	f	%
Advanced	102	100.00
Intermediate	0	0.00
Beginner	0	0.00
Total	102	100.00

Table 5 presents the learners’ numeracy skill levels in terms of Numbers, which typically includes number recognition, counting, and basic number sense. The data reveals that 100% of the learners are at the Advanced level, indicating that all preschoolers at Mabolo Elementary School have achieved full mastery in this foundational numeracy domain. There were no learners at either the Intermediate or Beginner levels. This exceptional outcome suggests highly effective instruction and support in number-related concepts, possibly enhanced by consistent parental reinforcement at home. It may also reflect the successful implementation of early numeracy programs or interventions within the school. This perfect performance rate highlights numbers as a particular strength among the learners and underscores the importance of sustaining current strategies that promote strong numeracy development in early childhood education.

**Table 6.** Level of numeracy skills of the learners in terms of Identifying Attributes.

Level	f	%
Advanced	98	96.08
Intermediate	0	0.00
Beginner	4	3.92
Total	102	100.00

Table 6 outlines the learners’ numeracy skill levels in terms of Identifying Attributes, which involves recognizing and categorizing objects based on characteristics such as size, shape, color, and pattern. The data indicates that a vast majority, 96.08%, of the learners are at the Advanced level, demonstrating strong abilities in distinguishing and grouping objects based on observable attributes. Notably, none of the learners fall into the Intermediate category, suggesting a distinct divide between high and low performance. Only 4 learners (3.92%) are categorized as Beginners, indicating minimal skill in this area. The high proportion of advanced



learners reflects effective early numeracy instruction and likely consistent reinforcement of sorting and classification tasks both at school and at home. However, the small percentage of beginners highlights the need for targeted support or intervention for those few learners to ensure they reach age-appropriate competencies in this foundational skill area.

**Table 7.** Level of numeracy skills of the learners in terms of Thinking Skills.

Level	f	%
Advanced	102	100.00
Intermediate	0	0.00
Beginner	0	0.00
Total	102	100.00

Table 7 presents the learners’ numeracy skill levels in terms of Thinking Skills, which include logical reasoning, problem-solving, and the ability to make connections between concepts. The results show that 100% of the learners are classified at the Advanced level, with no learners falling into the Intermediate or Beginner categories. This indicates that all preschoolers at Mabolo Elementary School have demonstrated exceptional cognitive abilities related to numeracy. Such results suggest that the school’s curriculum and instructional strategies are highly effective in promoting critical thinking and reasoning skills at an early age. It may also reflect strong home support and early exposure to mentally stimulating activities. This perfect performance in thinking skills, alongside similarly high results in other numeracy domains, positions Mabolo Elementary School as a model for early numeracy education, particularly in fostering higher-order thinking among young learners.

**Table 8.** Test of relationship between the Parental Involvement and Literacy Skills of the Learners

Parental Involvement VS	r-value	Strength of Correlation	p - value	Decision	Remarks
Alphabet Knowledge	-0.021	Negligible Negative	0.837	Do not reject Ho	Not Significant
Phonological Awareness	-0.064	Negligible Negative	0.524	Do not reject Ho	Not Significant
Book and Print Knowledge	-0.008	Negligible Negative	0.936	Do not reject Ho	Not Significant

**Note:** \*significant at p<0.05 (two-tailed).

In this study, a test of relationship was conducted using Pearson’s correlation coefficient to determine whether there was a significant association between parental involvement and three domains of literacy skills among preschool learners: alphabet knowledge, phonological awareness, and book and print knowledge. The statistical analysis included r-values indicating the strength and direction of the relationship, and p-values to test statistical significance, with the threshold set at 0.05. The results presented in Table 9 showed that all computed r-values were close to zero and negative: Alphabet Knowledge (r = -0.021, p = 0.837), Phonological Awareness (r = -0.064, p = 0.524), and Book and Print Knowledge (r = -0.008, p = 0.936). These r-values indicated negligible negative relationships. The corresponding p-values for each were all much higher than the 0.05 significance level, which led to the decision to “Do not reject Ho”—meaning the null hypothesis was not rejected in any literacy domain tested. Thus, the data suggested that there was no statistically significant relationship between parental involvement and literacy skills among the learners in this study. Based on these findings, it was concluded that regardless of the level of parental involvement, the alphabet knowledge, phonological awareness, and book and print knowledge of the learners did not differ in any statistically meaningful way. The results suggested that while parental involvement was important, it may not have been a determining factor for variations in literacy skills within this particular group. This could be because nearly all parents in the study already demonstrated high levels of involvement, resulting in minimal variability and making it difficult to detect a relationship. These findings contrasted with the broader body of research, which generally supported a positive association between parental involvement and early literacy development.



**Table 9.** Test of relationship between the Parental Involvement and Numeracy Skills of the Learners.

Parental Involvement VS:	r-value	Strength of Correlation	p - value	Decision	Remarks
Numbers	0.235*	Negligible Positive	0.017	Reject Ho	Significant
Identifying Attributes	-0.099	Negligible Negative	0.324	Do not reject Ho	Not Significant
Thinking Skills	0.104	Negligible Positive	0.300	Do not reject Ho	Not Significant

Note: \*significant at  $p < 0.05$  (two-tailed).

In this study, a test of relationship was conducted using Pearson's correlation coefficient to examine whether parental involvement was significantly associated with three specific domains of numeracy skills among preschool learners: Numbers, Identifying Attributes, and Thinking Skills. This statistical test measured both the strength and direction of the association (r-value) as well as the statistical significance (p-value), with the level of significance set at 0.05. Upon reviewing the numerical results in Table 9, it was found that the relationship between parental involvement and numeracy skills in "Numbers" yielded an r-value of 0.235 and a p-value of 0.017. Since the p-value was less than the significance level of 0.05, the null hypothesis was rejected for this variable, indicating a statistically significant but negligible positive correlation. This suggested that higher parental involvement was associated with slightly better performance in number-related skills among the learners. For "Identifying Attributes," the computed r-value was -0.099 and the p-value was 0.324, while for "Thinking Skills," the r-value was 0.104 and the p-value was 0.300. Both p-values were greater than 0.05, leading to the decision to "Do not reject Ho," and thus, there was no statistically significant relationship between parental involvement and these numeracy domains. Based on these findings, it was concluded that a significant relationship existed only between parental involvement and the learners' number skills, albeit the strength of the relationship was negligible. There was no significant relationship between parental involvement and either identifying attributes or thinking skills. The implication was that while parental engagement appeared to play a modest role in supporting children's basic number skills, it did not have a statistically significant impact on other areas of numeracy for this group.

## 5. Discussion

Based on the analysis of the data collected, the following findings were established in line with the study's statement of the problem: It was found that parental involvement in the educational activities of preschool learners at Mabolo Elementary School was consistently high. Parents regularly supervised their children's study schedules, provided ample learning resources, communicated frequently with teachers, and actively participated in both home-based and school-related learning activities. The aggregate weighted mean of parental involvement indicators fell within the "Very High" category, indicating a strong culture of family engagement. The assessment of learners' literacy skills revealed that the majority of preschool children demonstrated advanced proficiency in alphabet knowledge and phonological awareness, while just over half reached advanced levels in book and print knowledge. A notable proportion remained at the intermediate level, particularly in book and print knowledge, indicating areas where additional support could be beneficial. With regard to numeracy skills, all learners achieved advanced proficiency in numbers and thinking skills, while almost all also attained advanced status in identifying attributes, with only a small number at the beginner level. These results suggested strong foundational numeracy skills among the learners overall, with minimal gaps. Statistical analysis using Pearson's correlation coefficient showed that there was no significant relationship between the overall level of parental involvement and the learners' literacy skills, including alphabet knowledge, phonological awareness, and book and print knowledge. The p-values exceeded the 0.05 level of significance for all literacy domains, leading to the conclusion that higher or lower parental involvement did not correspond to notable differences in these literacy outcomes. The results further indicated that there was a modest but statistically significant positive relationship between parental involvement and learners' number skills. However, no significant relationships were found between parental involvement and the domains of identifying attributes or thinking skills, as p-values for these domains exceeded the level of

significance. Thus, the findings established that while parental involvement was uniformly high and learners generally demonstrated strong foundational skills, the direct statistical association between parental engagement and learner achievement was limited primarily to number skills. The results underscored the importance of the quality, focus, and context of parental involvement, as well as the need for targeted interventions to address specific areas of literacy and numeracy development.

## 6. Conclusion

Based on the findings of this study, it was concluded that preschool learners at Mabolo Elementary School demonstrated high levels of literacy and numeracy skills, with the majority achieving advanced or intermediate proficiency across the assessed domains. Parental involvement was consistently rated as very high, with parents providing substantial support for their children's educational activities both at home and in coordination with the school. However, statistical analysis revealed that there was no significant relationship between parental involvement and learners' literacy skills, nor with most numeracy domains, except for a modest positive association with number skills. These results suggested that while strong family engagement was present and undoubtedly beneficial for learners' overall development, it was not the decisive factor in shaping academic achievement within this cohort. Instead, other variables such as the effectiveness of classroom instruction, the quality of the school curriculum, and the broader educational environment appeared to have had a more substantial influence on children's learning outcomes. This conclusion emphasized the multifaceted and complex nature of early childhood education, highlighting the importance of a holistic approach that integrates quality teaching, responsive curriculum, and collaborative partnerships between home and school to support the diverse developmental needs of young learners.

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