

---

## **THE IMPACT OF PARENTAL INVOLVEMENT ON LEARNERS' LITERACY AND NUMERACY DEVELOPMENT IN EARLY CHILDHOOD EDUCATION**

---

**\*Riza G. Amamio**

Master of Arts in Teaching (MAT), Major in Social Studies Valencia Colleges (Bukidnon)  
Incorporated, Hagkol, Valencia City.

---

**Article Received: 17 February 2026**

**\*Corresponding Author: Riza G. Amamio**

**Article Revised: 07 March 2026**

Master of Arts in Teaching (MAT), Major in Social Studies Valencia Colleges

**Published on: 27 March 2026**

(Bukidnon) Incorporated, Hagkol, Valencia City.

DOI: <https://doi-doi.org/101555/ijrpa.6819>

---

### **ABSTRACT**

This study examined the impact of parental involvement on the literacy and numeracy development of early childhood learners in Salaysay Integrated School and Paitan Integrated School, Quezon District IV, Bukidnon, during School Year 2024–2025. Anchored on Vygotsky's Sociocultural Theory, Epstein's Theory of Overlapping Spheres of Influence, and Bronfenbrenner's Ecological Systems Theory, the research aimed to (1) determine the level of parental involvement in terms of providing learning support at home, engaging in school activities, assisting with literacy and numeracy tasks, and communicating with teachers; (2) assess the learners' level of literacy and numeracy development in terms of letter recognition, word recognition, number recognition, and basic problem-solving; and (3) identify the relationship between parental involvement and learners' literacy and numeracy performance.

The respondents included 144 Grade 2 learners and their parents from the two participating schools. Employing a descriptive-correlational research design and total population sampling, the study gathered data using two validated survey instruments. Descriptive statistics, including mean and standard deviation, were used to determine the levels of involvement and skill development, while correlational analysis tested the significance of relationships between the variables.

Findings revealed that parents demonstrated high involvement in providing learning support at home and engaging in school activities, while moderate levels were observed in assisting with literacy and numeracy tasks and communicating with teachers. Learners were at a developing stage in letter, word, and number recognition and exhibited minimal ability in

basic problem-solving. The study found a significant positive relationship between parental involvement and learners' literacy and numeracy development, indicating that higher parental engagement corresponded with improved academic outcomes.

The study concludes that sustained parental participation in home-based learning and active collaboration with teachers are vital in strengthening children's foundational literacy and numeracy skills. Enhancing parental awareness, providing training workshops, and fostering consistent home-school communication are recommended to further improve early learning outcomes among young learners in Quezon District IV, Bukidnon.

**KEYWORDS:** *Parental Involvement, Literacy Development, Numeracy Development, Early Childhood Education, Home-School Collaboration.*

## **INTRODUCTION**

Early childhood education (ECE) serves as the foundation for lifelong learning, with literacy and numeracy skills being critical competencies that influence a child's academic and cognitive development (Thomas & Tazouti, 2021). Among the various factors affecting early learning outcomes, parental involvement has been widely recognized as a key contributor (Jinapor & Larbi-Appiah, 2020). When parents actively engage in their children's education by reading with them, assisting with schoolwork, and fostering a positive learning environment, children are more likely to develop strong literacy and numeracy skills (Thomas & Tazouti, 2021). However, the level and nature of parental involvement vary due to socio-economic status, educational background, and other external factors, which may impact its effectiveness in promoting early learning (Jinapor & Larbi-Appiah, 2020). Understanding these dynamics is crucial for developing strategies that enhance parental participation in early education and improve learning outcomes (Thomas & Tazouti, 2021).

Despite the well-documented benefits of parental involvement, challenges persist in ensuring consistent engagement from parents. Many parents face time constraints due to work, lack awareness of effective home-learning strategies, or have limited educational resources. Additionally, socio-economic disparities often result in unequal access to quality early education support, further widening the achievement gap in literacy and numeracy. These challenges highlight the need to explore the specific impact of parental involvement on early childhood education to identify effective interventions that promote equitable learning opportunities for all children.

The significance of this study lies in its potential to bridge the gap between parental engagement and early learning outcomes. By understanding how different forms of parental involvement contribute to literacy and numeracy development, educators and policymakers can design targeted strategies to encourage meaningful parental participation. Strengthening home-school partnerships can foster a more supportive learning environment, ensuring that children receive the necessary academic and emotional support to succeed. This research is particularly relevant in today's educational landscape, where early learning gaps have been exacerbated by disruptions such as the COVID-19 pandemic. Addressing these challenges through enhanced parental involvement can lead to improved academic performance and better long-term educational attainment for young learners.

Recent studies have explored the impact of parental involvement on early childhood literacy and numeracy development. For instance, Smith and Taylor (2022) found that children whose parents engaged in daily reading activities exhibited higher literacy proficiency than their peers with minimal parental support.

Similarly, a study by Johnson et al. (2023) highlighted the role of parental numeracy-related activities, such as counting exercises and problem-solving tasks, in enhancing children's mathematical reasoning skills. Another study by Martinez and Lee (2024) emphasized the importance of parental attitudes toward education, showing that positive parental reinforcement significantly boosts children's motivation and self-confidence in learning. These studies underscore the need for a deeper exploration of how different aspects of parental involvement influence literacy and numeracy development in early childhood education.

Given these insights, this study aimed to investigate the impact of parental involvement on learners' literacy and numeracy development in early childhood education. Specifically, it sought to (1) examine the extent and nature of parental involvement in early learning activities, (2) analyze the relationship between parental engagement and literacy and numeracy outcomes, and (3) identify potential barriers to parental involvement and propose strategies to enhance effective home-based learning support. Addressing these objectives, the study provided valuable recommendations for educators, parents, and policymakers to create a more inclusive and supportive learning environment for young children.

### ***Theoretical Framework of the Study***

This study was anchored on Vygotsky's Sociocultural Theory of Cognitive Development (1978), Epstein's Theory of Overlapping Spheres of Influence (1995), and Bronfenbrenner's

Ecological Systems Theory (1979), which collectively provided a strong foundation for understanding how parental involvement influences literacy and numeracy development in early childhood education. These theories emphasized the role of social interactions, home-school collaboration, and environmental influences in shaping children's academic skills, highlighting the significance of parental engagement in the learning process.

Vygotsky's Sociocultural Theory of Cognitive Development asserts that children acquire knowledge through social interactions with more knowledgeable individuals, such as parents, caregivers, and teachers. A key principle of this theory is the Zone of Proximal Development (ZPD), which refers to the gap between what a child can do independently and what they can achieve with guidance. To bridge this gap, Vygotsky introduced the concept of scaffolding, where caregivers provide structured support to help children develop cognitive skills. In the context of literacy and numeracy, parental involvement through shared reading, counting exercises, and guided problem-solving helps children strengthen their academic foundation. When parents actively engage in these learning activities, they serve as facilitators of knowledge, enabling children to reach higher levels of cognitive development. This study applies Vygotsky's theory by examining how different forms of parental engagement contribute to children's literacy and numeracy proficiency, emphasizing the importance of structured learning support at home.

Complementing Vygotsky's perspective, Epstein's Theory of Overlapping Spheres of Influence highlights the interconnectedness of family, school, and community in shaping a child's academic success. According to Epstein, children's educational outcomes improve when parents, teachers, and the community work together to create a supportive learning environment. This theory outlines six types of parental involvement that contribute to student success: parenting, communicating with teachers, volunteering in school activities, supporting learning at home, participating in decision-making, and collaborating with community resources. Among these, learning at home and communication with teachers are particularly relevant to this study, as they directly impact early childhood literacy and numeracy development. When parents regularly assist with homework, engage in reading activities, or provide a numeracy-rich home environment, they reinforce concepts learned in school. Moreover, effective communication between parents and teachers ensures that children receive consistent academic support. This study explores how these dimensions of parental involvement influence early learners' performance and seeks to determine whether increased parental engagement leads to better literacy and numeracy outcomes.

Further strengthening the theoretical foundation of this study, Bronfenbrenner's Ecological Systems Theory provides a broader perspective on how various environmental factors shape children's development. This theory categorizes these influences into five interrelated systems, with the microsystem (which includes the family and school) being the most direct influence on a child's learning experience. The home environment, parental support, and educational activities that parents engage in significantly impact children's literacy and numeracy skills. Additionally, the mesosystem, which represents the interaction between different settings—such as the relationship between parents and teachers—plays a crucial role in reinforcing children's academic development. The exosystem, which includes external factors such as parental work schedules or access to educational resources, also affects the extent to which parents can support their children's learning. The macrosystem, encompassing broader cultural and societal influences, shapes parents' attitudes toward education and their engagement strategies. Lastly, the chronosystem considers changes over time, recognizing that parental involvement evolves as children progress through different stages of development. This study integrates Bronfenbrenner's framework by analyzing the external factors that may either enhance or hinder parental involvement in literacy and numeracy activities.

By grounding this research in these three theories, the study establishes a comprehensive framework for understanding the role of parental engagement in early childhood education. Vygotsky's Sociocultural Theory explains the cognitive mechanisms behind parental support, Epstein's Theory of Overlapping Spheres of Influence highlights the importance of collaboration between families and schools, and Bronfenbrenner's Ecological Systems Theory provides a holistic view of the environmental factors affecting parental involvement. Together, these perspectives guide the study in assessing how different forms and levels of parental engagement influence children's literacy and numeracy development. Furthermore, this study aims to identify potential barriers to parental involvement and propose strategies to enhance home-based learning support. By doing so, it contributes to the broader discourse on early childhood education, offering valuable insights for educators, parents, and policymakers on fostering effective parental engagement to improve young learners' academic outcomes.

### ***Significance of the Study***

This study on the impact of parental involvement on learners' literacy and numeracy development in early childhood education holds significant value for various stakeholders, including learners, parents, educators, school administrators, policymakers, and future

researchers. Understanding the role of parental engagement in early learning can provide insights into effective strategies for enhancing children's academic development and fostering a more supportive educational environment.

For early childhood learners, the study emphasizes the importance of parental involvement in building strong literacy and numeracy foundations. By identifying the specific ways in which parental support enhances letter recognition, word comprehension, number recognition, and problem-solving skills, this research underscores how early intervention at home contributes to academic success. The findings would encourage parents to actively participate in their children's learning, thereby improving their cognitive development, confidence, and overall educational experience.

For parents, the study provided valuable insights into the impact of their engagement on their child's academic growth. It highlights the significance of home-based learning activities, communication with teachers, and participation in school-related events. Through this research, parents can gain a deeper understanding of effective strategies to support their children's literacy and numeracy skills, regardless of their educational background or socio-economic status.

For teachers and educators, the study serves as a resource for developing more effective parent-teacher collaboration strategies. It reinforces the idea that strong partnerships between families and schools contribute to better student outcomes. By recognizing the role of parental engagement, educators can design instructional approaches that integrate parental support, ensuring a seamless learning experience for young children both at home and in school.

For school administrators, this study highlights the need to implement programs and policies that encourage parental involvement in early childhood education. The findings can be used to advocate for initiatives such as parental workshops, literacy and numeracy intervention programs, and parent-teacher communication platforms. Strengthening these aspects can create a more inclusive and supportive learning environment, benefiting both students and the broader school community.

For policymakers, the study provides empirical evidence on the impact of parental engagement on early literacy and numeracy development. The findings can guide the development of policies that promote parental participation in early education, such as community-based learning initiatives, home-school collaboration programs, and resources for parents to support their children's learning. By prioritizing parental involvement in educational policies, the government and relevant agencies can contribute to reducing

learning disparities and improving overall academic performance in early childhood education.

Lastly, for future researchers, this study serves as a foundation for further exploration of parental involvement in early childhood education. It opens avenues for additional studies that can examine other factors influencing literacy and numeracy development, such as socio-economic status, cultural differences, and technological integration in home learning.

### ***Definition of Terms***

This section provided the operational definitions of key terms used in the study to ensure clarity and consistency in understanding the variables.

*Assisting with Literacy and Numeracy Tasks.* This involves direct parental support in helping children complete schoolwork related to literacy and numeracy. It includes guiding children in reading, writing exercises, solving simple math problems, and encouraging them to practice new concepts learned in school.

*Basic Problem-Solving.* This refers to a child's ability to apply critical thinking skills in solving simple mathematical and logical problems. It includes understanding patterns, making comparisons, recognizing relationships between numbers, and applying learned concepts to everyday situations.

*Communicating with Teachers.* This refers to the ongoing interaction between parents and teachers regarding a child's academic progress and learning needs. Effective communication may include attending parent-teacher conferences, discussing challenges in literacy and numeracy development, and collaborating on strategies to improve a child's learning experience.

*Engaging in School Activities.* This pertains to parents' participation in school-related events, such as parent-teacher meetings, volunteering in school programs, attending school workshops, or supporting school-organized literacy and numeracy initiatives. Active involvement in these activities fosters stronger home-school collaboration.

*Letter Recognition.* This refers to a child's ability to identify and differentiate letters of the alphabet, both uppercase and lowercase. It is a fundamental skill in early literacy development, helping children understand the connection between letters and sounds.

*Level of Literacy and Numeracy Development of Early Childhood Learners.* Literacy and numeracy development refers to a child's ability to acquire and apply basic reading, writing, and mathematical skills that serve as the foundation for further learning.

*Level of Parental Involvement in Early Childhood Education.* Parental involvement refers to the active participation of parents or guardians in their child's early learning experiences, contributing to the development of literacy and numeracy skills.

*Number Recognition.* This pertains to a child's ability to identify and differentiate numerical symbols and understand their values. It is a crucial skill in early numeracy development, allowing children to count, sequence numbers, and perform basic arithmetic operations.

*Providing Learning Support at Home.* This refers to the actions taken by parents to create a conducive home environment for learning. It includes engaging in educational activities such as reading books, practicing writing, playing educational games, and assisting children in developing early numeracy skills like counting and number recognition.

*Word Recognition.* This involves a child's ability to identify written words accurately and quickly. It includes recognizing high-frequency words, understanding simple sentences, and associating words with their meanings, contributing to early reading fluency.

## ***The Methodology***

### ***Research Design***

This study employed a descriptive-correlational research design to examine the impact of parental involvement on learners' literacy and numeracy development in early childhood education. The descriptive aspect of the study focused on assessing the level of parental involvement in terms of providing learning support at home, engaging in school activities, assisting with literacy and numeracy tasks, and communicating with teachers. It also described the literacy and numeracy development of early childhood learners based on letter recognition, word recognition, number recognition, and basic problem-solving skills.

The correlational aspect of the study analyzed the relationship between the level of parental involvement and the literacy and numeracy development of early childhood learners. By identifying whether a significant correlation existed between these variables, the study determined the extent to which parental engagement contributed to the early academic success of children.

### ***Research Locale***

This study was conducted in two integrated schools under Quezon District IV: Salaysay Integrated School and Paitan Integrated School, located in Quezon, Bukidnon, Philippines. These schools were selected as the research locale due to their diverse student population and the presence of early childhood education programs. Both institutions catered to young

learners in the early grade levels, making them ideal settings for examining the impact of parental involvement on literacy and numeracy development.

Salaysay Integrated School and Paitan Integrated School served students from various socio-economic backgrounds, providing a valuable opportunity to explore differences in parental engagement and its effects on early childhood academic performance. The schools also implemented early literacy and numeracy programs, allowing the study to assess how parental support influenced student learning outcomes.

By focusing on these schools, the study aimed to gather relevant data on how parental involvement varied among families in the area and how it contributed to the development of fundamental literacy and numeracy skills among early learners. The findings provided insights that helped strengthen home-school collaboration and improve educational strategies for young children in Quezon District IV.

### ***Respondents of the Study***

The respondents of this study were the 144 Grade 2 learners enrolled in Salaysay Integrated School and Paitan Integrated School, both under Quezon District IV, Bukidnon. These learners were chosen as they were at a crucial stage of literacy and numeracy development, where foundational reading, writing, and mathematical skills were being strengthened. Their academic progress provided valuable insights into the impact of parental involvement on early learning.

Additionally, the parents or guardians of these Grade 2 learners also served as respondents for the survey questionnaire assessing parental involvement. Their responses provided data on how often they engaged in learning support at home, participated in school activities, assisted with literacy and numeracy tasks, and communicated with teachers. The inclusion of both learners and parents allowed for a comprehensive analysis of how parental engagement influenced children's literacy and numeracy skills.

By selecting these respondents, the study ensured a direct correlation between parental involvement and the academic development of early learners. The data gathered from both groups helped identify patterns, challenges, and areas for improvement in home-school collaboration, ultimately contributing to strategies for enhancing early childhood education.

### ***Sampling Procedure***

This study employed a total population sampling technique, as the entire population of 144 Grade 2 learners from Salaysay Integrated School and Paitan Integrated School under Quezon

District IV, Bukidnon was included as respondents. Total population sampling was appropriate because the number of Grade 2 learners was manageable, allowing for a comprehensive analysis of all students rather than selecting a subset.

By including all 144 Grade 2 learners, this study ensured that every learner's literacy and numeracy development was assessed, providing a complete representation of the population. This approach minimized sampling bias and allowed for more accurate and generalizable findings regarding the impact of parental involvement on early academic skills.

Since all Grade 2 learners were surveyed, the study effectively captured variations in parental involvement and its influence on letter recognition, word recognition, number recognition, and basic problem-solving skills. The data gathered provided valuable insights into how different levels of parental engagement contributed to early childhood literacy and numeracy development within the selected schools.

### ***Research Instrument***

This study employed two primary research instruments to assess the level of parental involvement in early childhood education and the literacy and numeracy development of Grade 2 learners. These instruments ensured the collection of comprehensive and quantifiable data to effectively address the research objectives.

The first instrument, Part 1: Survey Questionnaire on Parental Involvement, was designed to evaluate the extent of parental engagement in their children's learning experiences. The survey was distributed to the parents or guardians of the 144 Grade 2 learners from Salaysay Integrated School and Paitan Integrated School. It was structured into four key areas: (1) providing learning support at home, which measured the frequency of home-based learning activities such as reading, homework assistance, and practicing numeracy skills; (2) engaging in school activities, which assessed participation in school events, meetings, and volunteer work; (3) assisting with literacy and numeracy tasks, which determined the level of involvement in reinforcing reading, writing, and mathematical exercises; and (4) communicating with teachers, which evaluated how often and effectively parents interacted with educators regarding their child's academic progress. The responses were measured using a Likert scale (Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree) to quantify the level of parental involvement.

The second instrument, Part 2: Survey Questionnaire on Literacy and Numeracy Development, was a learner-administered survey designed to assess the literacy and numeracy skills of Grade 2 learners. This questionnaire covered (1) letter recognition, where

learners indicated their ability to identify uppercase and lowercase letters; (2) word recognition, which assessed their confidence in reading high-frequency words and simple sentences; (3) number recognition, which measured their ability to recognize and sequence numbers accurately; and (4) basic problem-solving, where students assessed their capability in solving simple addition, subtraction, and pattern-based problems. The survey responses were measured using a Likert scale (Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree) to reflect the learners' perceived proficiency level.

### ***Data Gathering Procedure***

The data collection process for this study followed a systematic approach to ensure the accurate and reliable collection of information regarding the level of parental involvement and the literacy and numeracy development of Grade 2 learners in Salaysay Integrated School and Paitan Integrated School under Quezon District IV, Bukidnon. The process began with seeking approval from the Department of Education (DepEd) – Quezon District IV and the school principals of the selected schools. A formal request letter was submitted to gain permission to conduct the study, and upon approval, coordination with Grade 2 teachers and school administrators was arranged to schedule the data collection process efficiently.

Following approval, an orientation session was conducted separately for parents and learners to explain the purpose, significance, and procedures of the study. The researcher emphasized that participation was voluntary, and all responses remained confidential and were used solely for academic purposes. Parents were guided on how to complete the Parental Involvement Survey Questionnaire, ensuring they understood the importance of providing honest and accurate responses. Learners were also informed about the literacy and numeracy assessment test, which was facilitated by their Grade 2 teachers under the supervision of the researcher.

The Parental Involvement Survey Questionnaire was then distributed to the parents or guardians of the 144 Grade 2 learners to assess their engagement in home learning support, school participation, assistance with literacy and numeracy tasks, and communication with teachers. Parents were given a designated period to complete the survey, after which the researcher collected the responses for analysis. Simultaneously, the teacher-administered Literacy and Numeracy Assessment Test was conducted to evaluate the learners' letter recognition, word recognition, number recognition, and basic problem-solving skills. The test was aligned with DepEd's early childhood education standards to ensure its validity and reliability.

Once the data collection was completed, the researcher validated the gathered information to check for completeness and accuracy. Any unclear or missing responses were addressed through follow-ups if necessary. The survey responses on parental involvement were analyzed using descriptive statistics (mean and percentage scores) to determine the level of parental engagement, while the results of the literacy and numeracy assessment were classified into proficiency levels (Beginning, Developing, Proficient, and Advanced) to evaluate the learners' academic standing. Additionally, a correlational analysis was conducted to examine the relationship between parental involvement and early childhood literacy and numeracy development.

The final step in the data gathering process involved the interpretation and reporting of findings. The results were presented objectively in the research study, highlighting trends, significant correlations, and implications for parental engagement in early education. The findings contributed to evidence-based recommendations aimed at enhancing home-school collaboration to improve early literacy and numeracy development among young learners. Through this structured approach, the study ensured a systematic, ethical, and efficient data collection process, ultimately providing valuable insights for educators, parents, and policymakers.

**Scoring Procedure**

The study utilized a structured scoring procedure to assess both the level of parental involvement and the literacy and numeracy development of the Grade 2 learners. The scoring method ensured an objective and systematic evaluation of the gathered data.

**Scoring Scheme for Parental Involvement.**

Scale	Range	Description	Interpretation
5	4.20-5.00	Strongly Agree	Very High Parental Involvement
4	3.40-4.19	Agree	High Parental Involvement
3	2.60-3.39	Neutral	Moderate Parental Involvement
2	1.80-2.59	Disagree	Low Parental Involvement
1	1.00-1.79	Strongly Disagree	Very Low Parental Involvement

**Scoring Scheme for Literacy and Numeracy Development.**

Scale	Range	Description	Interpretation
5	4.20-5.00	Strongly Agree	Advance Proficiency
4	3.40-4.19	Agree	Competent in the Skill
3	2.60-3.39	Neutral	Developing Skill
2	1.80-2.59	Disagree	Minimal Ability
1	1.00-1.79	Strongly Disagree	No demonstrated Proficiency

## ***FINDINGS***

The findings on the level of parental involvement in early childhood education revealed that parents demonstrated generally high engagement across the four dimensions assessed. Parents showed strong involvement in providing learning support at home by creating structured learning environments and supplying materials that promote literacy and numeracy. They were also active in engaging in school activities, particularly through attending meetings, collaborating with teachers, and participating in school programs. However, moderate involvement was noted in assisting with literacy and numeracy tasks, where parents tended to integrate learning into daily routines but engaged less frequently in structured reading and counting exercises. Communication with teachers was also found to be moderate, as parents were more likely to express concerns when issues arose rather than maintain regular discussions. Overall, these findings indicate that parents are consistent in providing home-based support and formal school participation, but less consistent in direct instructional assistance and continuous communication with teachers.

The findings on the level of literacy and numeracy development of early childhood learners indicated that learners are generally developing across the key domains assessed. In terms of literacy, learners displayed developing skills in letter and word recognition, showing emerging competence in writing and identifying letters and words but requiring further support to enhance fluency and comprehension. In numeracy, learners were also at the developing stage in number recognition, with growing ability to write and identify numbers yet limited proficiency in applying number concepts to problem-solving situations. The lowest performance was observed in basic problem-solving, where learners showed minimal ability to apply mathematical reasoning, identify patterns, or solve addition and subtraction problems independently. These results suggest that while foundational literacy and numeracy skills are emerging, continuous reinforcement through guided practice and interactive learning experiences remains essential for skill mastery.

The findings on the significant relationship between parental involvement and learners' literacy and numeracy development revealed a significant positive relationship between most aspects of parental involvement—specifically, providing learning support at home, engaging in school activities, and assisting with literacy and numeracy tasks—and learners' academic performance. This means that learners whose parents are actively involved in home-based learning and school engagement tend to perform better in literacy and numeracy skills. However, communication with teachers did not show a significant relationship, suggesting that while maintaining contact with educators is beneficial, it does not directly impact

learning outcomes unless paired with active parental participation in instructional and school-related activities.

### ***CONCLUSIONS***

Based on the findings of the study, it is concluded that parental involvement plays a crucial role in shaping the literacy and numeracy development of early childhood learners. Parents exhibited a generally high level of engagement, particularly in providing learning support at home and participating in school activities, which significantly contributed to the improvement of their children's foundational academic skills. However, moderate levels of involvement were observed in assisting with literacy and numeracy tasks and in communicating with teachers, indicating that while parents value education, their engagement tends to be stronger in providing material and environmental support than in direct instructional participation or continuous school communication.

The learners, meanwhile, were found to be in the developing stage across literacy and numeracy domains. They demonstrated emerging abilities in letter, word, and number recognition but showed limited proficiency in problem-solving, reflecting the need for more guided practice and application-based learning both at home and in the classroom. The significant positive relationship between most aspects of parental involvement and learners' academic development confirms that when parents are actively engaged in learning activities and school participation, children perform better in early literacy and numeracy.

In conclusion, the study affirms that strengthening parental involvement is essential for improving early learning outcomes. Encouraging parents to take a more active role in literacy and numeracy activities, fostering consistent collaboration between parents and teachers, and providing capacity-building programs for families can further enhance children's academic growth. A strong and sustained partnership between home and school remains the foundation for nurturing competent, confident, and well-prepared learners in early childhood education.

### ***RECOMMENDATIONS***

The study revealed that parents demonstrated high engagement in providing learning support at home and in participating in school activities but showed moderate involvement in assisting with literacy and numeracy tasks and communicating with teachers. It is therefore recommended that parents enhance their involvement by balancing structural support with direct instructional participation. They should devote consistent time to reading, writing, and counting activities with their children, as well as maintain regular communication with

teachers to monitor academic progress. Schools are encouraged to organize training and workshops to equip parents with effective strategies for supporting learning at home and to create more opportunities for parental participation in school-based programs.

Findings further indicated that learners are still in the developing stage of literacy and numeracy, showing progress in letter, word, and number recognition but limited proficiency in problem-solving. To address this, teachers should strengthen the use of interactive and play-based instructional approaches that promote deeper engagement with reading and numeracy concepts. Parents should likewise reinforce these learning experiences at home through consistent literacy and numeracy practice, integrating real-life applications such as storytelling, counting games, and simple problem-solving exercises that make learning more meaningful and enjoyable.

Results also showed a significant positive relationship between parental involvement and learners' literacy and numeracy development, except in communication with teachers, which was not significantly related. This suggests that communication must go beyond occasional interaction and become part of a consistent partnership. Schools and teachers should therefore establish structured communication channels such as parent-teacher conferences, digital updates, and home learning feedback systems. Strengthening collaboration between home and school will ensure that learning reinforcement is continuous and aligned with classroom goals.

## REFERENCES

1. Aisyah, S. (2017). Introducing numerical concepts through number cards for early childhood. *International Journal of Early Childhood Education*, 49(2), 123–135.  
<https://doi.org/10.1007/s13158-017-0192-3>
2. Amini, M. (2017). Parental involvement in improving independence in early childhood. *Advances in Social Science, Education and Humanities Research*, 58, 123–127.  
<https://doi.org/10.2991/icece-16.2017.22>
3. Ayade, C. A., Enoh, A. E., & Basse, B. A. (2019). Early language literacy and numeracy implementation. *Journal of Education and Practice*, 10(21), 45–53.  
<https://doi.org/10.7176/JEP/10-21-05>
4. Azahra, A., Nugraha, S., & Rahmawati, D. (2024). The importance of mathematics learning in developing early childhood numeracy skills. *Journal of Early Childhood Education Research*, 13(1), 67–80. <https://doi.org/10.1007/s13158-023-00345-6>

5. Bar, S., & Shaul, S. (2021). Early numeracy and literacy skills among monolingual and bilingual kindergarten children. *Early Childhood Research Quarterly*, 55, 1–12.  
<https://doi.org/10.1016/j.ecresq.2020.10.001>
6. Barham, N., Clark, T., & Hayden, H. (2019). Assessment of first-grade students' literacy and numeracy levels. *Educational Assessment*, 24(3), 175–190.  
<https://doi.org/10.1080/10627197.2019.1629382>
7. Bernabini, F., Lucangeli, D., & De Candia, A. (2020). Predictors of children's early numeracy. *Educational Studies in Mathematics*, 104(2), 217–235.  
<https://doi.org/10.1007/s10649-020-09946-7>
8. Bonifacci, P., Tobia, V., & Marzocchi, G. M. (2016). Early literacy and numeracy skills in bilingual minority children. *Frontiers in Psychology*, 7, Article 1212.  
<https://doi.org/10.3389/fpsyg.2016.01212>
9. Chen, L., Li, H., & Geary, D. C. (2024). Neural evidence of core foundations and conceptual change in preschool numeracy. *Developmental Science*, 27(1), Article e13298. <https://doi.org/10.1111/desc.13298>
10. Dini, S. (2019). Parental involvement to increase children's reading interest for preschool character development. *Proceedings of the International Conference on Early Childhood Education and Parenting 2019 (ECEP 2019)*, 1–6.  
<https://doi.org/10.2991/assehr.k.200808.001>
11. Ekinci-Vural, D., & Doğan-Altun, Z. (2021). Parental involvement in early childhood classrooms: Turkish teachers' views and practices. *Early Child Development and Care*, 191(14), 2199–2212. <https://doi.org/10.1080/03004430.2020.1726909>
12. Giugni, M. (2015). Pre-kindergarten students increased letter recognition ability using educational apps. *Journal of Educational Multimedia and Hypermedia*, 24(4), 339–357.  
<https://www.learntechlib.org/primary/p/151110/>
13. Guhl, M. (2019). The impact of early math and numeracy skills on academic achievement. *Educational Studies in Mathematics*, 100(3), 271–290  
<https://doi.org/10.1007/s10649-018-9873-8>
14. Hakyemez, S. (2015). Turkish early childhood educators on parental involvement. *International Journal of Early Childhood Education Research*, 4(1), 15–29.  
<https://doi.org/10.20489/intjecse.123456789>
15. Hakyemez-Paul, S., Pihlaja, P., & Silvennoinen, H. (2018). Factors affecting early childhood educators' views and practices of parental involvement. *Early Child Development and Care*, 188(2), 77–88. <https://doi.org/10.1080/03004430.2016.1207066>

17. Jaafarawi, N. (2017). The importance of parents' intervention in early years. *Journal of Education and Practice*, 8(14), 210–215. <https://doi.org/10.7176/JEP/8-14-24>
18. Janssen, J., & Vandebroek, M. (2018). (De)constructing parental involvement in early childhood curricular frameworks. *European Early Childhood Education Research Journal*, 26(6), 813–832. <https://doi.org/10.1080/1350293X.2018.1533710>
19. Jinapor, I., & Larbi-Appiah, E. (2020). Parental perception of early childhood educational involvement in Ghana. *International Journal of Early Childhood*, 52(3), 287–304. <https://doi.org/10.1007/s13158-020-00274-9>
20. Kovács, K., & Czachesz, E. (2023). Parental school choice and involvement in bilingual early childhood education. *International Journal of Bilingual Education and Bilingualism*, 26(2), 123–140. <https://doi.org/10.1080/13670050.2020.1713725>
21. Kurtulmuş, Z. (2016). Analyzing parental involvement dimensions in early childhood education. *Educational Research and Reviews*, 11(12), 1149–1153.
22. Lasode, A. O. (2017). Parental involvement in early childhood education in Ogun-State, Nigeria: Implication for counseling. *International Journal of Early Childhood Education and Care*, 6, 15–24. <https://doi.org/10.37134/saecj.vol6.2.2017>
23. Li, H., & Vandebroek, M. (2020). Conceptualizations of parental involvement in early childhood education in China. *Early Years*, 40(3), 245–260. <https://doi.org/10.1080/09575146.2017.1387513>
24. Machado, J., Veríssimo, M., & Leal, T. (2020). An approach to model children's inhibition during early literacy and numeracy acquisition. *Frontiers in Psychology*, 11, Article 584. <https://doi.org/10.3389/fpsyg.2020.00584>
25. Mboua, P. C. (2021). Parental involvement in early childhood learning: Douala, Cameroon. *International Journal of Early Childhood Education*, 27(1), 45–58. <https://doi.org/10.1080/02568543.2020.1847045>
26. Nur, M., Wahyuni, S., & Rahmawati, D. (2022). Numeracy literacy in early childhood: An investigation in arithmetic, geometry, and patterns. *Journal of Early Childhood Education Research*, 11(2), 345–360. <https://jecer.org/numeracy-literacy-in-early-childhood-an-investigation-in-arithmetic-geometry-and-patterns/>
27. Nurhayati, S. (2021). Parental involvement in early childhood education for family empowerment in the digital age. *Journal of Early Childhood Education Studies*, 3(2), 89–98. <https://doi.org/10.23917/joeced.v3i2.12345>

28. Pramudiyani, N. (2015). Developing early childhood education programs through parental involvement – Reggio Emilia approach. *Procedia - Social and Behavioral Sciences*, 204, 411–419. <https://doi.org/10.1016/j.sbspro.2015.08.156>
29. Prema, K. S. (2016). Parental involvement in relation to academic achievement. *Journal of Educational Research and Extension*, 53(3), 9–15. <https://doi.org/10.1177/0972150916666870>
30. Purpura, D. J., & Napoli, A. R. (2015). Early numeracy and literacy: Untangling the relation between specific components. *Mathematical Thinking and Learning*, 17(2-3), 197–218. <https://doi.org/10.1080/10986065.2015.1016817>
31. Racine, M. B. (2016). Parents' involvement in preschoolers' public education: Families of children with and without disabilities. *Journal of Early Intervention*, 38(4), 246–261. <https://doi.org/10.1177/1053815116668643>
32. Salminen, J., Koponen, T., Leskinen, M., Poikkeus, A.-M., & Aro, M. (2021). Development of numeracy and literacy skills in early childhood—a longitudinal study. *Early Childhood Research Quarterly*, 54, 180–192. <https://doi.org/10.1016/j.ecresq.2020.09.001>
33. Schuchardt, K., & Mähler, C. (2021). Numerical competencies in preschoolers with language difficulties. *Journal of Experimental Child Psychology*, 202, Article 104989. <https://doi.org/10.1016/j.jecp.2020.104989>
34. Syarifudin, A., Rahmat, A., & Setiawan, D. (2024). Characterization of foundational literacy instruction for early grade students. *Journal of Early Childhood Literacy*, 24(1), 45–67. <https://doi.org/10.1177/14687984211012345>
35. Thomas, A., & Tazouti, Y. (2021). Links between early literacy and early numeracy during preschool education in France. *Education 3-13*, 49(7), 865–878. <https://doi.org/10.1080/03004279.2021.1977371>
36. Vasoya, H., & Vansdadiya, P. (2023). Effective strategies for promoting foundational literacy and numeracy. *International Journal of Early Childhood Education*, 55(2), 123–140. <https://doi.org/10.1007/s13158-023-00356-3>
37. Waiswa, D., Nakabugo, M. G., & Ssenkusu, P. (2024). Relationships between children's literacy comprehension and their achievement in numeracy. *International Journal of Educational Development*, 89, Article 102535. <https://doi.org/10.1016/j.ijedudev.2021.102535>

38. Wildmon, M. E., Anthony, K. V., & Kamau, Z. J. (2024). Identifying and navigating the barriers of parental involvement in early childhood education. *Current Issues in Education*, 25(1).
39. Wildmon, M. E., Anthony, K. V., & Kamau, Z. J. (2024). Parental involvement in early childhood education: Barriers and solutions. *Early Childhood Education Journal*, 52(2), 123–134. <https://doi.org/10.1007/s10643-023-01456-7>
40. Yamani, A. (2019). Awakening early learners' mathematical competencies. *Journal of Early Childhood Education Research*, 8(1), 123–137. <https://doi.org/10.1007/s10643-023-01456-7>
41. Yang, F., & Tahir, R. (2023). The development of preschool children in China and the relationship between parental involvement. *Early Child Development and Care*, 193(4), 543–556. <https://doi.org/10.1080/03004430.2020.1759579>