

Article

Parental Engagement, Media Behavior, and Academic Readiness of Preschool Learners

Liezel Yburan

Corresponding Author: liezelyburan@gmail.com

Abstract: This study examined the influence of parents' engagement and preschoolers' media behavior on the academic readiness of learners, particularly their literacy and numeracy skills. Using a descriptive-correlational design, data were gathered from 182 preschool learners and their parents through parent engagement and media behavior surveys, together with teacher-documented literacy and numeracy records. Findings showed that parents' engagement was very high, while learners' media behavior was generally very satisfactory. In literacy, most learners were advanced in alphabet knowledge, while phonological awareness showed mixed levels and book and print knowledge was generally intermediate. In numeracy, most learners were advanced in number skills and identifying attributes, whereas thinking skills were generally intermediate. Parents' engagement had significant moderate positive relationships with both literacy and numeracy skills. Learners' media behavior had a significant negligible negative relationship with literacy skills, but its relationship with numeracy skills was negligible and not significant. The findings highlight the importance of sustained parent-school collaboration and guided, developmentally appropriate media use in supporting preschool academic readiness within supportive home and school learning environments for children.

Keywords: parental engagement, media behavior, academic readiness, literacy skills, numeracy skills, preschool learners

Introduction

Early childhood development encompasses cognitive, emotional, and social dimensions, forming the foundation of children's learning trajectories. Developmental theorists emphasize that children acquire essential cognitive abilities through rich and supportive early experiences (Pianta et al., 2020). Within this context, parental engagement—defined as parents' active, sustained, and meaningful participation in

their child's learning process—plays a crucial role in strengthening early literacy, numeracy, and socio-emotional competencies (Goodall & Montgomery, 2014; Wilder, 2014). Unlike parental involvement, which is often limited to school-based participation, parental engagement focuses on learning-centered interactions at home that directly influence children's academic pathways. At the same time, the growing prevalence of digital media has reshaped how young children learn and interact with their environment. As preschoolers increasingly access cellphones, tablets, and televisions, digital media has become intertwined with early learning experiences, prompting concerns and opportunities around school readiness (Lauricella et al., 2023).

The interplay between parental engagement and digital media utilization is complex yet critical. Parents who demonstrate strong engagement practices tend to provide purposeful guidance regarding their children's media use, encouraging balanced and developmentally appropriate screen activities (Dong et al., 2024). Conversely, minimal parental engagement—manifested through limited supervision or lack of structured learning routines—often leads to unregulated and excessive screen exposure, which may compromise essential pre-academic skills such as attention regulation, language development, and early literacy (Swider-Cios et al., 2023). These concerns are magnified by the expanding availability of touchscreen devices and the increasing normalization of screen time in Filipino households, where many children exceed recommended usage limits (Tulviste & Tulviste, 2024). Media usage, particularly when unsupervised, has been shown to displace key learning activities such as shared reading, interactive play, and responsive communication, thereby altering the quality of the home learning environment (Dore et al., 2020).

Despite global attention to digital media and early childhood learning, gaps remain in understanding how these factors converge within the Philippine context. Research from Western and high-income nations dominates existing literature, leaving limited evidence on how Filipino parents' engagement behaviors shape children's media habits and school readiness. Studies on Filipino preschoolers have reported concerns regarding developmental delays and weakened cognitive outcomes linked to excessive screen time (Dy et al., 2023; Laurence et al., 2024), yet these findings are insufficient to explain how media use interacts with home learning practices in culturally diverse, resource-variable communities. As digital access continues to expand across socioeconomic groups, understanding how media behavior influences academic readiness within Filipino households becomes increasingly urgent (Caballero-Juliá et al., 2024).

Issues surrounding learners' academic readiness are also emerging, particularly as digital media becomes integrated into daily routines. Many preschoolers enter kindergarten with uneven foundational skills—such as limited vocabulary, short attention spans, and weaker socio-emotional regulation—often associated with early and prolonged exposure to multimedia without adult mediation (Valdez & Mendoza, 2024). In communities where parents juggle multiple jobs, children frequently rely on digital devices for entertainment, reducing opportunities for literacy-rich interactions.

At the same time, preschool teachers across Cebu City have observed noticeable differences in classroom readiness among learners who receive consistent parental engagement and those whose home environments are characterized by passive or unsupervised media consumption. These disparities highlight the need to examine how digital media, when combined with varying levels of parental engagement, shapes early academic trajectories.

In many early childhood centers in Cebu City, teachers report that some preschoolers struggle with following routines, sustaining focus, and participating in collaborative activities—behaviors closely linked with both media exposure and parental engagement patterns. Instances of children entering preschool with limited familiarity with books, reduced expressive language, or reliance on tablets for self-regulation illustrate a widening developmental gap. These observable issues indicate that the challenges surrounding parental engagement, preschoolers' media behavior, and academic readiness are not theoretical concerns but lived realities in actual classroom settings. Understanding these contextual problems provides a compelling justification for conducting the present study.

From the researcher's viewpoint as an educator, these classroom patterns reflect a pressing need to investigate how home-based learning conditions affect school preparedness. Learners with high parental engagement consistently demonstrate stronger attention, better social interactions, and improved readiness for structured learning. In contrast, children with limited adult guidance or excessive screen-based routines often face difficulties in concentration, task completion, and peer interaction. These disparities emphasize the significant influence of home learning environments—particularly parental engagement and media habits—on early developmental and academic outcomes.

Given these realities, it is imperative to explore the impact of parental engagement and preschoolers' media habits on academic readiness within the Philippine setting. While digital media offers potential educational benefits, its effects depend on how parents regulate, mediate, and integrate media into children's learning routines. The research gap thus lies in the limited understanding of how these variables interact specifically in Filipino homes, particularly in urban early childhood education contexts where digital access is widespread but parental engagement varies widely. This study seeks to generate evidence-based insights that can guide parents, educators, and policymakers in fostering balanced learning environments that combine meaningful family engagement with appropriate media use.

Literature Review

Research showed that parents' engagement and children's media experiences are important parts of the early learning environment that can influence school readiness. Castro et al. (2015) found through meta-analysis that parental involvement was positively associated with students' academic achievement, supporting the value of parents' participation in children's learning. More recent work has shown that the

home literacy environment, including shared reading, conversations, and parent-supported learning activities, contributes to children's vocabulary and emerging literacy development (Kim & Yim, 2024; O'Brien et al., 2024; Galea et al., 2025). Dixon and Kim (2025) likewise reported that home-language and literacy practices were associated with biliteracy development among bilingual children. At the same time, children's media behavior may either support or interfere with development depending on the amount, content, context, and parental mediation of media use. Madigan et al. (2019) found that greater screen time was associated with poorer developmental screening outcomes, while Hutton et al. (2020) reported associations between higher screen-based media use and differences in brain white-matter integrity among preschool-aged children. Barr (2019) further explained that young children's digital learning is strongly shaped by the surrounding family media ecology. These findings support examining parents' engagement in terms of information supporting child development, engagement opportunities, and perceived impact, together with preschoolers' media behavior.

Preschool academic readiness also depends on the development of foundational literacy and numeracy skills. Recent literacy research has emphasized alphabet knowledge, phonological awareness, vocabulary, print concepts, decoding, and oral-language development as important foundations for later reading (Kittle et al., 2024). Piasta et al. (2022) found meaningful differences in children's growth in alphabet knowledge, while Rehfeld et al. (2022) showed that phonemic-awareness instruction can improve early reading-related skills. Cabell et al. (2022) further demonstrated that preschool children's oral-language and decoding development contributes to beginning writing ability, and Kim et al. (2021) showed that reading fluency is closely connected with later reading comprehension. Numeracy development is likewise important for school readiness because children must develop number knowledge, recognize attributes and patterns, compare quantities, and apply early reasoning skills. Among Filipino children, Yang et al. (2021) found that phonological awareness, rapid naming, and vocabulary contributed to both print knowledge and early numeracy, illustrating the interconnected nature of early academic competencies. Cheah et al. (2024) also reported that an integrated language, literacy, and numeracy intervention improved important developmental skills among Cebuano-speaking preschool children.

Methodology

The study employed a descriptive-correlational research design to examine the relationship between parents' engagement, preschoolers' media behavior, and academic readiness. The descriptive component determined the levels of parental engagement in terms of information supporting the child's development, engagement opportunities, and impact of engagement, as well as the learners' media behavior, literacy skills, and numeracy skills. The correlational component examined whether significant relationships existed among these variables without manipulating them.

The study was conducted at Cebu City Central School under the Department of Education, Cebu City Division. The respondents consisted of parents and preschool learners enrolled during School Year 2025–2026. Purposive sampling was used to select participants who met the inclusion criteria. Three instruments were used. The Parental Engagement Survey contained 17 indicators covering information support, engagement opportunities, and impact of engagement. The Learner’s Media Behavior Survey contained 12 indicators assessing the frequency and purpose of media use. Both instruments used a five-point Likert scale. Academic readiness was measured through literacy and numeracy records based on teacher-documented performance. Literacy included alphabet knowledge, phonological awareness, and book and print knowledge, while numeracy included numbers, identifying attributes, and thinking skills. A three-point performance scale of Beginning, Developing, and Mastered was used for these academic readiness indicators. Data gathering involved securing permission from school authorities, obtaining consent, distributing and retrieving questionnaires, and gathering teacher-recorded performance data. Frequency, percentage, weighted mean, and standard deviation were used for descriptive analysis. Pearson Product-Moment Correlation was identified as the inferential test for examining relationships among parental engagement, media behavior, and academic readiness.

Results

Table 1. Level of parents’ engagement in the school of the learners in terms of information to support child’s development

S/ N	Indicators	WM	SD	Verbal Description
1	I receive information from my child's teacher on what I can do at home to help my child improve or extend his/her learning	4.46	0.63	Very High
2	I receive information on what my child should be learning and should be able to do at each developmental stage.	4.41	0.71	Very High
3	The teacher provides us with resources that can be used at home.	4.33	0.73	Very High
4	I work with my student at home on age-appropriate activities that correlate with the work being done in the preschool.	4.27	0.87	Very High
5	I work with my child often (2-3 times a week) on preschool level materials.	4.18	0.82	High
6	I receive regular updates from teachers on my child’s progress.	4.37	0.75	Very High
	Aggregate Weighted Mean	4.33		
	Aggregate Standard Deviation		0.75	Very High

The findings show that parents' engagement in terms of information to support their child's development was Very High, with an aggregate weighted mean of 4.33 and an aggregate standard deviation of 0.75. The highest-rated indicator was receiving information from the teacher on how parents could help improve or extend learning at home, with a weighted mean of 4.46, followed by receiving information on what the child should be learning at each developmental stage, with a weighted mean of 4.41. The lowest-rated indicator was working with the child two to three times a week on preschool-level materials, with a weighted mean of 4.18, interpreted as High. The findings imply that parents generally receive strong guidance and communication from teachers and actively support learning at home. However, the comparatively lower frequency of regular home-based practice suggests the need to encourage more consistent parent-child learning routines.

Table 2. Level of parent's engagement in the school of the learners in terms of engagement opportunities

S / N	Indicators	WM	SD	Verbal Description
1	I receive information on how to sign up for events going on at school.	4.35	0.69	Very High
2	I receive information on activities/ events going on in school so I can participate.	4.41	0.67	Very High
3	I am given options on when and how to volunteer.	4.29	0.77	Very High
4	The school encourages families to be involved (assist in classroom, lead talks or activities)	4.27	0.79	Very High
5	I help with in-class activities.	4.11	0.85	High
6	I am invited to meetings so I can learn about what was going on in my child's preschool classroom.	4.36	0.74	Very High
7	The school has an annual survey that identifies volunteer throughout the school year.	4.24	0.72	Very High
8	The school provides flexible volunteer options giving opportunities to parents who are employed.	4.19	0.81	High
	Aggregate Weighted Mean	4.28		Very High
	Aggregate Standard Deviation		0.75	

The findings show that parents' engagement in terms of engagement opportunities was Very High, with an aggregate weighted mean of 4.28 and an aggregate standard deviation of 0.75. The highest-rated indicator was receiving information about school activities and events so parents could participate, with a weighted mean of 4.41. This was followed by being invited to meetings about classroom activities, with a weighted mean of 4.36. The lowest-rated indicator was helping with in-class activities, with a weighted mean of 4.11, interpreted as High. The findings imply that the school generally provides accessible and varied opportunities for parental participation. However, direct involvement in classroom activities

and flexible volunteer opportunities may still be strengthened to encourage more consistent participation among parents.

Table 3. Level of parent's engagement in the school of the learners in terms of impact of engagement

S/ N	Indicators	WM	SD	Verbal Description
1	My child's behavior has improved since I have been involved with their preschool education.	4.49	0.66	Very High
2	I feel that my involvement has made my child feel more comfortable in their preschool setting.	4.48	0.65	Very High
3	My child has shown more growth since I started being involved or engaged in their preschool program.	4.49	0.62	Very High
	Aggregate Weighted Mean	4.49		
	Aggregate Standard Deviation		0.64	Very High

The findings show that parents' engagement in terms of impact of engagement was Very High, with an aggregate weighted mean of 4.49 and an aggregate standard deviation of 0.64. The highest-rated indicators were improvement in the child's behavior and increased growth since the parent became involved in the preschool program, both with a weighted mean of 4.49. Feeling that parental involvement made the child more comfortable in the preschool setting followed closely, with a weighted mean of 4.48. The findings imply that parents strongly perceived their involvement as beneficial to their children's behavior, adjustment, and development. This suggests that sustained family participation may contribute positively to children's preschool experiences and supports the need for schools to continue strengthening parent engagement initiatives.

Table 4. Summary on the Level of Parents' Engagement in the School of the Learners

Components	WM	SD	Verbal Description
Information to support child's development	4.33	0.75	Very High
Engagement opportunities	4.28	0.75	Very High
Impact of engagement	4.49	0.64	Very High
Grand Mean	4.37		Very High
Grand Standard Deviation		0.71	

The findings show that the overall level of parents' engagement in the school of the learners was Very High, with a grand mean of 4.37 and a grand standard deviation of 0.71. Among the components, impact of engagement obtained the highest weighted mean of 4.49, followed by information to support the child's development with 4.33, while engagement opportunities received the lowest weighted mean of 4.28. Despite this, all three components were interpreted as Very High. The findings imply that parents were highly involved in supporting their

children's preschool education and perceived their participation as beneficial to their children's development. This suggests that strong communication, accessible engagement opportunities, and sustained parent-school collaboration should be maintained to support learners' academic readiness and overall preschool experience.

Table 5. Level of media behavior of the learners

S/ N	Indicators	WM	SD	Verbal Description
1	The child uses digital media gadgets to complete homework assignments online.	3.55	1.21	Very Satisfactory
2	The child uses video calling applications to talk to family or friends.	3.79	1.03	Very Satisfactory
3	The child uses digital media gadgets to learn poems, rhymes, and alphabets.	3.84	1.05	Very Satisfactory
4	The child uses digital media gadgets to learn math, numbers, and tables.	3.69	1.13	Very Satisfactory
5	The child uses digital media gadgets to recognize shapes, sounds, and colors.	3.83	1.13	Very Satisfactory
6	The child uses digital media gadgets to learn various science concepts online.	3.82	1.04	Very Satisfactory
7	The child uses digital media gadgets to learn to draw or write.	3.63	1.12	Very Satisfactory
8	The child plays video games on digital media gadgets.	3.40	1.21	Satisfactory
9	The child uses digital media gadgets to watch stories.	3.73	1.08	Very Satisfactory
10	The child watches adult programs (soap operas, news, sports, movies, etc.) on media screens online.	3.14	1.35	Satisfactory
11	The child uses digital media gadgets to learn letters, words, vocabulary, and language online.	3.85	1.05	Very Satisfactory
12	The child uses digital media gadgets to watch random things for enjoyment (music, advertisements, taking photos, etc.).	3.73	1.11	Very Satisfactory
	Aggregate Weighted Mean	3.67		
	Aggregate Standard Deviation		1.13	Very Satisfactory

The findings show that the learners' media behavior was generally Very Satisfactory, with an aggregate weighted mean of 3.67 and an aggregate standard deviation of 1.13. The highest-rated indicator was the use of digital media gadgets to learn letters, words, vocabulary, and language online, with a weighted mean of 3.85. This was followed by using digital media to learn poems, rhymes, and alphabets with 3.84, and to recognize shapes, sounds, and colors

with 3.83. The lowest-rated indicator was watching adult programs online, with a weighted mean of 3.14, interpreted as Satisfactory. The findings imply that learners commonly used digital media for educational purposes, particularly for language and concept development, although recreational and age-inappropriate viewing was also present. This suggests the need for continued parental guidance and supervision to ensure that media use remains balanced, purposeful, and developmentally appropriate.

Table 6. Level of literacy skills of the learners in terms of alphabet knowledge

Level	f	%
Advanced	103	56.59
Intermediate	48	26.37
Beginner	31	17.03
Total	182	100.00

The findings show that the learners generally demonstrated strong alphabet knowledge. Out of 182 learners, 103 or 56.59 percent were at the Advanced level, while 48 or 26.37 percent were at the Intermediate level. Only 31 learners or 17.03 percent were classified as Beginners. This indicates that more than half of the learners had already developed a high level of familiarity with alphabet-related skills. However, the presence of learners in the Intermediate and Beginner levels suggests that some still require additional support. The findings imply that continued activities on letter recognition, letter naming, and letter-sound association may help strengthen the literacy readiness of learners who have not yet reached the advanced level.

Table 7. Level of literacy skills of the learners in terms of phonological awareness

Level	f	%
Advanced	73	40.11
Intermediate	65	35.71
Beginner	44	24.18
Total	182	100.00

The findings show that the learners generally demonstrated developing phonological awareness. Among the 182 learners, 73 or 40.11 percent were at the Advanced level, while 65 or 35.71 percent were at the Intermediate level. Meanwhile, 44 learners or 24.18 percent were classified as Beginners. This indicates that a considerable number of learners had already developed strong awareness of sounds in spoken language, although a substantial group still required further support. The findings imply that continued activities involving rhyming, sound identification, syllable segmentation, and phoneme manipulation may help strengthen the phonological awareness of learners who remain at the intermediate and beginner levels.

Table 8. Level of literacy skills of the learners in terms of book and print knowledge

Level	f	%
Advanced	52	28.57
Intermediate	81	44.51
Beginner	49	26.92
Total	182	100.00

The findings show that the learners' book and print knowledge was generally at the Intermediate level. Among the 182 learners, 81 or 44.51 percent were classified as Intermediate, while 52 or 28.57 percent were at the Advanced level. Meanwhile, 49 learners or 26.92 percent were classified as Beginners. This indicates that many learners had already developed some understanding of books and printed materials, but a considerable proportion still needed additional support.

Table 9. Level of numeracy skills of the learners in terms of numbers

Level	f	%
Advanced	112	61.54
Intermediate	54	29.67
Beginner	16	8.79
Total	182	100.00

The findings show that the learners generally demonstrated strong numeracy skills in terms of numbers. Among the 182 learners, 112 or 61.54 percent were at the Advanced level, while 54 or 29.67 percent were at the Intermediate level. Only 16 learners or 8.79 percent were classified as Beginners. This indicates that most learners had already developed a high level of competence in basic number-related skills. The findings imply that existing numeracy activities are generally effective, although continued practice in counting, number recognition, quantity comparison, and simple number relationships may help support learners who remain at the intermediate and beginner levels.

Table 10. Level of numeracy skills of the learners in terms of identifying attributes

Level	f	%
Advanced	86	47.25
Intermediate	75	41.21
Beginner	21	11.54
Total	182	100.00

The findings show that the learners generally demonstrated strong numeracy skills in identifying attributes. Among the 182 learners, 86 or 47.25 percent were at the Advanced level, while 75 or 41.21 percent were at the Intermediate level. Only 21 learners or 11.54 percent were classified as Beginners. This indicates that most learners were able to recognize and compare observable characteristics such as shape, size, color, and other attributes. The findings imply that existing numeracy experiences support learners' classification and comparison skills, although additional sorting, matching, and attribute-identification activities may help strengthen the skills of learners who remain at the intermediate and beginner levels.

Table 11. Level of numeracy skills of the learners in terms of thinking skills

Level	f	%
Advanced	28	15.38
Intermediate	92	50.55
Beginner	62	34.07
Total	182	100.00

The findings show that the learners' numeracy skills in terms of thinking skills were generally at the Intermediate level. Among the 182 learners, 92 or 50.55 percent were classified as Intermediate, while 62 or 34.07 percent were at the Beginner level. Only 28 learners or 15.38 percent reached the Advanced level. This indicates that many learners were still developing higher-order numeracy abilities involving reasoning, problem-solving, pattern recognition, and decision-making. The findings imply that teachers may need to provide more structured activities that promote comparison, sequencing, classification, prediction, and simple problem-solving to strengthen learners' mathematical thinking and improve overall numeracy readiness.

Table 12. Test of relationship between the parents' engagement and the literacy skills of the learners

Variables	r-value	Strength of Correlation	p - value	Decision	Remarks
Parents' Engagement and Literacy Skills	0.652*	Moderate Positive	0.000	Reject Ho	Significant

*significant at $p < 0.05$ (two-tailed)

The findings show a moderate positive relationship between parents' engagement and the literacy skills of the learners, with an r-value of 0.652. The p-value of 0.000 was lower than the 0.05 level of significance, leading to the rejection of the null hypothesis.

This indicates that the relationship between the two variables was statistically significant. The positive correlation suggests that higher levels of parents' engagement were associated with higher levels of learners' literacy skills. The findings imply that active parental involvement may play an important role in supporting children's literacy development. Thus, strengthening communication, home-based learning support, and meaningful parent-school participation may contribute to improved literacy readiness among preschool learners.

Table 13. Test of the relationship between the parents' engagement and the numeracy skills of the learners

Variables	r-value	Strength of Correlation	p - value	Decision	Remarks
Parents' Engagement and Numeracy Skills	0.591*	Moderate Positive	0.000	Reject Ho	Significant

*significant at $p < 0.05$ (two-tailed)

The findings show a moderate positive relationship between parents' engagement and the numeracy skills of the learners, with an r-value of 0.591. The p-value of 0.000 was lower than the 0.05 level of significance, leading to the rejection of the null hypothesis. This indicates that the relationship between parents' engagement and numeracy skills was statistically significant. The positive correlation suggests that higher levels of parental engagement were associated with higher levels of learners' numeracy skills. The findings imply that parents' active participation in their children's education may help support the development of early mathematical abilities. Strengthening home-based numeracy activities, parent-school communication, and meaningful parental involvement may therefore contribute to improved numeracy readiness among preschool learners.

Table 14. Test of relationship between the learners' media behavior and the literacy skills of the learners

Variables	r-value	Strength of Correlation	p - value	Decision	Remarks
Learners' Media Behavior and Literacy Skills	-0.154*	Negligible Negative	0.038	Reject Ho	Significant

*significant at $p < 0.05$ (two-tailed)

The findings show a negligible negative relationship between learners' media behavior and their literacy skills, with an r-value of -0.154. The p-value of 0.038 was lower than the 0.05 level of significance, leading to the rejection of the null hypothesis. This indicates that the relationship between learners' media behavior and literacy

skills was statistically significant, although the strength of the relationship was very weak. The negative direction suggests that higher levels of media behavior were associated with slightly lower literacy skills. The findings imply that while media use may support some learning activities, excessive or less purposeful media exposure may not necessarily contribute positively to literacy development. Thus, guided, age-appropriate, and educational media use should be encouraged alongside direct literacy experiences such as reading, conversation, and print-based activities.

Table 15. Test of relationship between the learners' media behavior and the numeracy skills of the learners

Variables	r-value	Strength of Correlation	p - value	Decision	Remarks
Learners' Media Behavior and Numeracy Skills	-0.139	Negligible Negative	0.062	Do not reject Ho	Not Significant

*significant at $p < 0.05$ (two-tailed)

The findings show a negligible negative relationship between learners' media behavior and their numeracy skills, with an r-value of -0.139. The p-value of 0.062 was higher than the 0.05 level of significance, leading to the decision not to reject the null hypothesis. This indicates that the relationship between learners' media behavior and numeracy skills was not statistically significant. Although the correlation was negative, its strength was very weak, suggesting that variations in media behavior were not meaningfully associated with learners' numeracy performance. The findings imply that media behavior alone may not be a major factor in the development of numeracy skills. Other experiences such as direct instruction, hands-on mathematical activities, and parent-guided learning may have a stronger influence on preschool learners' numeracy development.

Discussions

The findings indicate that parents demonstrated a very high level of engagement in their children's preschool education, particularly in receiving information to support child development, participating in engagement opportunities, and perceiving positive outcomes from their involvement. Parents believed that their participation contributed to improvements in their children's behavior, comfort, and overall growth. Learners' media behavior was generally favorable, with digital devices commonly used for educational purposes such as learning letters, vocabulary, rhymes, shapes, numbers, and science concepts. In terms of academic readiness, learners showed stronger performance in alphabet knowledge and number skills, while phonological awareness, book and print knowledge, identifying attributes, and especially thinking skills reflected greater variation and a need for continued support.

The relationship findings showed that parents' engagement had significant moderate positive relationships with both literacy and numeracy skills, indicating that higher parental involvement was associated with better academic readiness among learners. In contrast, learners' media behavior had a significant but negligible negative relationship with literacy skills and a negligible negative, non-significant relationship with numeracy skills. These results suggest that parental engagement was more consistently associated with learners' academic readiness than media behavior. The findings therefore emphasize the importance of sustained parent-school collaboration, regular home-based learning activities, and targeted support for weaker literacy and numeracy areas, while ensuring that children's media use remains guided, purposeful, and developmentally appropriate.

Conclusion

The findings indicate that parents demonstrated a very high level of engagement in their children's preschool education, particularly in receiving information to support child development, participating in engagement opportunities, and perceiving positive outcomes from their involvement. Parents believed that their participation contributed to improvements in their children's behavior, comfort, and overall growth. Learners' media behavior was generally favorable, with digital devices commonly used for educational purposes such as learning letters, vocabulary, rhymes, shapes, numbers, and science concepts. In terms of academic readiness, learners showed stronger performance in alphabet knowledge and number skills, while phonological awareness, book and print knowledge, identifying attributes, and especially thinking skills reflected greater variation and a need for continued support. The relationship findings showed that parents' engagement had significant moderate positive relationships with both literacy and numeracy skills, indicating that higher parental involvement was associated with better academic readiness among learners. In contrast, learners' media behavior had a significant but negligible negative relationship with literacy skills and a negligible negative, non-significant relationship with numeracy skills. These results suggest that parental engagement was more consistently associated with learners' academic readiness than media behavior. The findings therefore emphasize the importance of sustained parent-school collaboration, regular home-based learning activities, and targeted support for weaker literacy and numeracy areas, while ensuring that children's media use remains guided, purposeful, and developmentally appropriate.

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