

Vocabulary Size of Children Aged 5 – 9: The Contribution of Shared Reading and Screen Time

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Abstract

Language development is shaped by children's exposure to linguistic input, which increasingly comes from both caregiver–child interaction and digital media. Although shared reading is a well-established predictor of vocabulary growth, less is known about how different forms of shared reading and temporally differentiated screen exposure jointly contribute to language development. This study examined the relative contributions of shared book reading, shared poetry reading, weekday screen time, and weekend screen time to passive vocabulary in children aged 5–9 years ($N = 636$). Children completed a standardized passive vocabulary test, while parents reported literacy practices and screen exposure. Hierarchical regression analyses controlling for age revealed distinct and context-dependent associations. Weekday screen time was negatively associated with vocabulary, whereas shared book reading showed the strongest positive association. Shared poetry reading also made a smaller but significant positive contribution. In contrast, weekend screen time showed a weak positive association with vocabulary. The findings demonstrate that children's vocabulary development is differentially shaped by both the type of literacy input and the temporal context of screen exposure. The study advances current research by integrating differentiated forms of shared reading and screen use within a single model, highlighting the importance of context-sensitive approaches to children's digital and linguistic environments.

Keywords: early school age, language development, passive vocabulary, preschool age, screen time, shared reading

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1. Introduction

Language development is a fundamentally social process shaped by children's interactions with more knowledgeable others within their everyday environments. According to Lev Vygotsky's sociocultural theory, cognitive development occurs through socially mediated interaction, whereby adults scaffold children's engagement with culturally meaningful activities (Vygotsky, 1978). This perspective is further elaborated in the theory of Mediated Learning Experience developed by Reuven Feuerstein, which emphasizes that intentionality, reciprocity, and the mediation of meaning are central to cognitive modifiability and higher-order learning (Feuerstein et al., 1999). Within these theoretical frameworks, language acquisition can be understood as a socially situated developmental process shaped by the frequency and quality of cognitively stimulating adult-child interactions.

Among the most influential contexts for such interaction is the home language environment. Shared reading has long been regarded as a particularly powerful mechanism through which children acquire vocabulary, narrative competence, and broader literacy-related skills (Dickinson et al., 2010; Mol & Bus, 2011). Through repeated exposure to decontextualized language and adult scaffolding, shared reading creates conditions that support lexical growth and semantic development. At the same time, contemporary home environments are increasingly characterized by children's exposure to digital media, introducing new forms of linguistic input as well as potential competition for time otherwise devoted to language-rich interpersonal interaction.

Recent theoretical approaches conceptualize the home literacy environment as a dynamic and multidimensional system in which literacy practices interact with family routines, parental beliefs, and media-related habits (Bingham et al., 2017). From this perspective, the displacement account suggests that developmental effects associated with literacy-related activities may arise not only through direct linguistic stimulation but also through their replacement of less cognitively enriching experiences, including passive screen-based media exposure (Hofferth, 2010). This framework highlights the need to examine literacy practices and screen exposure not as isolated predictors but as interrelated components of children's everyday developmental

ecology.

Although both shared reading and screen exposure have been independently linked to children's language development, several conceptual and empirical questions remain unresolved. In particular, existing research has paid limited attention to differences between shared reading of conventional books and poetic texts, despite the possibility that these literary forms may provide qualitatively distinct linguistic experiences. Similarly, relatively little is known about whether weekday and weekend screen exposure differentially relate to children's vocabulary development, despite potentially important differences in family routines and patterns of adult mediation across these temporal contexts.

These unresolved questions are especially relevant during middle childhood, when vocabulary continues to expand rapidly and increasingly supports academic learning. Understanding how distinct forms of shared reading and differentiated screen-use patterns jointly relate to vocabulary outcomes may therefore contribute to a more nuanced account of language development within contemporary media-saturated home environments.

The present study addresses this issue by examining the relative contribution of shared reading practices and screen exposure to passive vocabulary development in children aged 5 – 9 years. Specifically, the study addresses the following research questions:

RQ1. To what extent do shared book reading and shared poetry reading differentially predict passive vocabulary size in children aged 5 – 9 years?

RQ2. To what extent do weekday and weekend screen time differentially predict passive vocabulary size in children aged 5 – 9 years?

RQ3. What is the relative contribution of screen time and shared reading practices to the prediction of children's passive vocabulary size?

The study is significant both theoretically and empirically. Theoretically, it extends sociocultural and mediated learning perspectives by integrating differentiated literacy practices and digital media exposure within a single analytical framework. Empirically, it addresses several understudied aspects of children's language

development, including the role of shared poetry reading, the distinction between weekday and weekend screen exposure, and their simultaneous contribution to vocabulary outcomes during middle childhood. By clarifying these relationships, the study contributes to a more ecologically valid understanding of contemporary home language environments and may inform evidence-based recommendations for parents, educators, and policymakers.

Based on sociocultural theory, mediated learning principles, and prior findings on home literacy environments, we hypothesize that, beyond age-related effects, shared reading with parents – both of conventional books and poetry – will positively predict children’s passive vocabulary size, whereas greater screen exposure, particularly during weekdays, will be negatively associated with passive vocabulary outcomes.

2. Literature Review

2.1. Vocabulary Development

Vocabulary development in middle childhood constitutes a critical foundation for subsequent academic achievement, reading comprehension, and broader cognitive development (Bukhalenkova et al., 2024). Although vocabulary growth between the ages of 5 and 9 is less rapid than during the early “lexical explosion” observed in toddlerhood (Altmann et al., 2009), this developmental period remains characterized by substantial lexical expansion and increasing academic language demands. Children’s vocabulary size is consistently associated with literacy attainment, school readiness, and later educational outcomes (Dale et al., 2023; Lee, 2011), making it a particularly informative indicator of language development. Moreover, vocabulary can be assessed efficiently using standardized picture-based instruments across different linguistic contexts (Jalilevand et al., 2022; Oshchepkova et al., 2025; Zhou et al., 2025).

A substantial body of evidence indicates that children’s vocabulary acquisition is strongly shaped by the quality and quantity of linguistic input available in the home environment (Kortava, 2024; Smith et al., 2024; Sundqvist et al., 2024). This input is typically conceptualized through parent–child interactional practices (Savchenko et

al., 2025; Veresov et al., 2025), particularly shared reading, as well as through children's exposure to digital media (Liu & Gao, 2025; Oshchepkova et al., 2025). Accordingly, recent scholarship has increasingly focused on two central dimensions of children's home language experiences: cognitively enriching parent–child literacy interactions (Li et al., 2025) and screen-based media exposure (Oshchepkova et al., 2025). However, their relative and combined contribution to vocabulary development in school-aged children remains insufficiently understood.

2.2. Shared Reading and Vocabulary Development

Shared reading has consistently been identified as one of the most powerful predictors of children's language and literacy development (Dowdall et al., 2020; Mol & Bus, 2011). Through repeated exposure to lexically rich and decontextualized language, shared reading supports vocabulary acquisition, inferential reasoning, narrative competence, and broader emergent literacy skills. Meta-analytic evidence demonstrates a significant contribution of shared reading to both overall cognitive development and vocabulary outcomes (Galea et al., 2025), while longitudinal findings suggest that earlier onset and greater regularity of shared reading are associated with stronger receptive vocabulary, grammatical development, and phonological awareness (Lenhart et al., 2022).

Importantly, recent studies suggest that not only the frequency but also the qualitative characteristics of shared reading interactions matter. Abstract extratextual talk during parent–child reading has been shown to significantly predict vocabulary growth, highlighting the importance of interactive discourse beyond simple exposure to text (Muhinyi & Rowland, 2023). Similarly, interactive adult mediation appears to enhance lexical learning by scaffolding children's semantic processing and supporting deeper engagement with textual content (Sénéchal & Cornell, 1993; Flack et al., 2018).

At the same time, contemporary research increasingly recognizes that different forms of literacy exposure may exert distinct developmental effects. While conventional prose-based book reading has been extensively investigated (Noble et

al., 2019), considerably less attention has been paid to poetry as a distinct form of shared reading (Read et al., 2022). Poetic texts are characterized by heightened rhythmic, phonological, and lexical density (Read et al., 2019), features that may promote phonological sensitivity (Lim & Chew, 2018), semantic precision (Stange & Wyant, 2008), and metalinguistic awareness (Bozorgian et al., 2026). Despite these theoretically relevant characteristics, empirical evidence comparing the contribution of shared poetry reading and conventional book reading to vocabulary development remains scarce.

2.3. Screen Time and Language Development

Parallel to research on shared reading, growing attention has been directed toward the role of digital media exposure in children's language development (Derakhshan & Park, 2026; Madigan et al., 2020). Existing findings remain mixed. While some studies report negative associations between screen exposure and language outcomes (Duch et al., 2013; Rayce et al., 2024), others suggest that screen effects are domain-specific and moderated by contextual variables such as content type, parental mediation, and usage patterns (Oshchepkova et al., 2025; Xie et al., 2024). For example, evidence indicates that screen exposure may not significantly predict vocabulary size while still negatively affecting broader narrative competence (Oshchepkova et al., 2025).

One particularly important but underexplored dimension concerns the temporal organization of screen exposure (Chigarkova, & Soldatova, 2026). Emerging evidence suggests that weekday and weekend screen use may differ substantially in structure, supervision, and developmental implications. Whereas some studies indicate that weekend screen exposure may have limited negative effects (Bhutani et al., 2024), regular weekday screen use may be more strongly associated with adverse developmental outcomes (Andoniou, 2025; Sigmundová & Sigmund, 2021). Moreover, recent work has shown that weekend screen use by both children and parents is associated with children's language skills, suggesting that discretionary family-time media use may carry distinct developmental consequences (Tulviste & Tulviste, 2024). These findings highlight the need for a more differentiated analysis

of screen-time patterns.

2.4. The Displacement Perspective

One influential explanation for the relationship between screen exposure and language development is the displacement perspective, according to which screen time may influence developmental outcomes by reducing opportunities for cognitively stimulating interpersonal interactions, including shared reading and conversation (Christakis & Hale, 2025; Hofferth, 2010). From this perspective, screen exposure is not inherently detrimental; rather, its effects depend partly on the extent to which it replaces richer forms of linguistic input and adult–child interaction. Parental involvement may further moderate these associations by shaping the quality of children’s engagement with digital media (Veraksa & Rodova, 2025).

3. Methodology

3.1. Participants

The study included 636 Russian-speaking children aged 65 to 109 months ($M = 85.6$, $SD = 7.84$), including 318 boys and 318 girls, and one of their parents, the vast majority of whom were mothers (99%). Participants were recruited from families with predominantly middle socioeconomic status and average household income. Mothers’ educational attainment ranged from 9 to 20 years of formal education ($M = 14.4$ years). Although both monolingual and bilingual children were included in the sample, Russian was the primary language of communication for all participants. The inclusion criteria required that children be between 5 and 9 years of age, have sufficient proficiency in Russian to complete the vocabulary assessment, and have no reported developmental disorders affecting language acquisition.

3.2. Measures

3.2.1. Passive vocabulary

Children’s passive vocabulary size was assessed using the Picture Test for Passive Vocabulary (Oshchepkova et al., 2025), a standardized instrument developed for

Russian-speaking children aged 4–9 years. The test comprises 10 age-differentiated series administered at six-month developmental intervals. Each series includes 12 test items presented as picture cards, in which the target stimulus is accompanied by distractors that are visually or functionally similar. During administration, children were asked to identify the picture corresponding to the verbally presented target word. The assessment yields three indices: (a) the ceiling item (the final item within a series at which the child produced three or more errors), (b) the total number of errors, and (c) a total score calculated as the difference between the ceiling item and the number of errors. The total score was used as the dependent variable in all subsequent analyses, with higher scores indicating larger passive vocabulary size.

3.2.2. Parent-report questionnaire

Parents completed a structured questionnaire assessing demographic characteristics and home language environment variables. The questionnaire included: Family income level; Maternal education level; Frequency of shared book reading; Frequency of shared poetry reading; Average weekday screen time; Average weekend screen time

The frequency of shared reading of books and poetry was measured on an 8-point Likert-type scale ranging from 1 (I do not have time to read to my child) to 8 (several times a day).

Parents also reported the average duration of their child's screen exposure separately for weekdays and weekends.

3.3. Research Design

The study employed a cross-sectional correlational design aimed at examining the relative contribution of shared reading practices and screen exposure to children's passive vocabulary development. A hierarchical multiple regression framework was used to estimate the unique contribution of age, screen-time indicators, and shared reading frequency. This design enabled examination of the incremental explanatory

power of literacy-related practices beyond demographic and media-use factors.

3.4. Procedure

Data collection was conducted individually in educational settings familiar to the children. Children completed the passive vocabulary assessment in a quiet testing environment under the supervision of trained research assistants. The assessment was administered individually following the standardized testing protocol described by Oshchepkova et al. (2025). Simultaneously, parents completed the questionnaire either in paper-and-pencil format or electronically.

Written informed consent was obtained from all participating parents prior to data collection. The study protocol was approved by the Ethics Committee of the Faculty of Psychology at Lomonosov Moscow State University and was conducted in accordance with ethical standards for research involving human participants.

3.5. Data Analysis

Data were analyzed using hierarchical multiple regression with the forced-entry method in jamovi (Version 2.6).

Prior to model estimation, the assumptions of multiple regression were evaluated. Visual inspection of Q–Q plots and the Shapiro–Wilk test indicated no significant deviations from normality of residuals ($W = 0.99$, $p = .12$). Inspection of residual-versus-fitted-value plots supported the assumption of homoscedasticity. Multicollinearity diagnostics indicated acceptable tolerance, with variance inflation factor (VIF) values below 2.0 for all predictors. The linearity of associations between continuous predictors and the dependent variable was confirmed through visual inspection of scatterplots.

The hierarchical regression analysis was conducted in three steps.

Step 1. Child age (in months) was entered as a control variable.

Step 2. Screen-time variables were entered as categorical predictors representing quartile-based groups of weekday and weekend screen exposure. The first quartile (shortest screen time) served as the reference category.

Step 3. Frequency of shared book reading and shared poetry reading was entered as continuous predictors. Although ordinal in nature, these variables were treated as continuous due to the sufficient number of response categories and approximately monotonic scaling. All reading-frequency variables were recoded such that higher values reflected more frequent shared reading.

This analytical strategy allowed for estimation of the incremental contribution of differentiated screen-use patterns and shared reading practices to passive vocabulary outcomes beyond age-related variance.

4. Results

4.1. Descriptive Statistics

The study involved 623 children. The mean age was 85.6 months ($SD = 7.84$). The total score on the Picture Test ranged from 0 to 120 points ($M = 101.2$, $SD = 15.2$). The distribution of reading frequency for books and poetry was skewed (median = 5, $Q1-Q3 = 3-6$). Analysis of mean vocabulary values depending on screen time quartiles showed that the group with the highest weekday screen time (4th quartile) had the lowest vocabulary scores ($M = 97.2$, $SD = 13.4$), whereas the group with the highest weekend screen time (4th quartile) had the highest ($M = 103.6$, $SD = 12.7$). Detailed distribution is presented in Table 1.

Table 1

Descriptive Statistics of Key Variables (N = 623)

Variable	<i>M (SD)</i>	Median [Q1; Q3]	Min–Max
Total score on the Picture Test	101 (15.2)	107 [89; 113]	0–120
Frequency of reading books	4.81 (1.73)	5	1–8
Frequency of reading poetry	5.96 (1.64)	6	2–8
Groups by weekday screen time duration			
1 (lowest time)	37.8 (22.1)	40.0	0–60
2	85.9 (7.12)	90.0	65–90
3	127 (14.8)	120.0	100–150
4 (highest time)	248 (83.9)	235.0	160–600

Variable	<i>M</i> (<i>SD</i>)	Median [<i>Q1</i> ; <i>Q3</i>]	Min–Max
Groups by weekend screen time duration			
1 (lowest time)	82.2 (36.9)	90	0–120
2	226 (82.6)	210	130–150
3	309 (105)	300	160–650
4 (highest time)	476 (159)	420	660–900

4.2. Hierarchical Regression Analysis

The analysis yielded a statistically significant regression model ($F(5, 617) = 22.7, p < .001$), explaining 15.5% of the variance ($R^2 = .155$) in passive vocabulary size. All three steps of the model significantly improved predictive power (see Table 2).

At the first step (Model 1), age explained 13.2% of the variability in vocabulary ($R^2 = .132, p < .001$), confirming the expected strong relationship between age and language development.

Adding weekday and weekend screen time variables at the second step (Model 2) led to a significant, though small, increase in explained variance: $\Delta R^2 = .0196$ ($F(6, 615) = 2.37, p = .028$). The total explained variance at this stage was 15.2% ($R^2 = .152$). Weekday screen time was a significant predictor ($\beta = -7.493, p < .001$), whereas weekend screen time did not reach significance ($p = 0.057$). The negative coefficient indicates that longer weekday screen time is associated with smaller passive vocabulary when age is controlled.

At the third, final step (Model 3), adding variables for the frequency of reading books and poetry also resulted in a significant increase in predictive power: $\Delta R^2 = .0118$ ($F(2, 613) = 4.33, p = .014$). The full model explained 16.3% of the variance ($R^2 = .163$).

Table 2

Results of Hierarchical Regression Analysis Predicting Passive Vocabulary

Predictor	Model 1	Model 2	Model 3
Intercept	40.48 (6.24)	42.35 (6.24)	32.75 (7.03)
Age	.705 (.073)*** [.363]	.699 (.0073)*** [.360]	.695 (.074)*** [.358]

Predictor	Model 1	Model 2	Model 3
Weekday screen time group (ref. = 1)			
2 vs 1		-.27 (1.83) [-.012]	-.05 (1.82) [-.003]
3 vs 1		-1.68 (1.62) [-.111]	-1.20 (1.62) [-.079]
4 vs 1		-7.49 (2.14)*** [-.494]	-7.33 (2.14)*** [-.483]
Weekend screen time group (ref. = 1)			
2 vs 1		.20 (1.41) [.013]	.15 (1.41) [.0097]
3 vs 1		5.40 (3.01) [.356]	5.90 (3.00) [.389]
4 vs 1		5.71 (2.99) [.376]	6.25 (2.99)* [.412]
Frequency of reading books			.98 (.365)** [.112]
Frequency of reading poetry			.83 (.383)* [.0899]
Model statistics			
R ²	.132	.152	.163
ΔR ²		.020*	.012*
F for ΔR ²		2.37	4.33
p for ΔR ²		.028	.014

Note. Screen time groups: 1 – 1st quartile (lowest time), 2 – 2nd quartile, 3 – 3rd quartile, 4 – 4th quartile (highest time). Reading variables were used as continuous (higher values = greater frequency). $N = 623$. * $p < .05$, ** $p < .01$, *** $p < .001$.

5. Discussion

The present study examined the relative contribution of shared reading practices and differentiated screen exposure to passive vocabulary development in Russian-speaking children aged 5 – 9 years. It was hypothesized that, beyond age-related effects, shared reading of both conventional books and poetry would positively predict passive vocabulary size, whereas excessive weekday screen exposure would be negatively associated with vocabulary outcomes.

Overall, the findings largely support this hypothesis and contribute to a more differentiated understanding of how literacy-related practices and digital media use jointly shape children's language development in contemporary home environments.

Preliminary descriptive analyses indicated that children's performance on the

Picture Test for Passive Vocabulary was consistent with previously reported age norms for Russian-speaking children (Oshchepkova et al., 2025a), supporting the validity of the obtained vocabulary estimates.

The wide variability in reported screen exposure: from complete absence of device use to highly intensive daily engagement – underscores the diversity of contemporary family media practices. This distributional pattern contextualizes the observed nonlinear association between weekday screen time and passive vocabulary, suggesting that negative vocabulary outcomes were associated primarily with relatively extreme levels of weekday exposure.

5.1. Age as the Primary Developmental Predictor

As expected, age emerged as the strongest predictor of passive vocabulary ($\beta = .358$, $p < .001$). This finding is consistent with well-established evidence demonstrating substantial lexical expansion throughout middle childhood. Although vocabulary growth during this period is less dramatic than during the early lexical acceleration observed in toddlerhood, middle childhood remains a developmental stage characterized by intensive semantic enrichment and increasing lexical differentiation.

The strong age effect observed in the present study confirms the developmental sensitivity of passive vocabulary as an indicator of linguistic maturation and justifies its inclusion as a control variable. More importantly, the persistence of significant effects of reading practices and screen exposure after controlling for age suggests that environmental factors make a meaningful contribution beyond normative developmental progression.

5.2. Excessive Weekday Screen Time as a Risk Factor

One of the most robust findings of the study was the negative association between the highest level of weekday screen exposure and passive vocabulary size. Specifically, children in the highest weekday screen-time quartile demonstrated significantly lower vocabulary scores than children in the lowest exposure group (B

$= -7.33, \beta = -.156, p < .001$).

Importantly, this association was observed only for the extreme exposure category, suggesting a nonlinear relationship between weekday screen time and vocabulary development. This pattern indicates the existence of a potential threshold effect: in the present sample, only screen exposure exceeding approximately 160 minutes per weekday was associated with significantly poorer vocabulary performance. This finding aligns with recent evidence indicating threshold rather than strictly linear effects of screen exposure on developmental outcomes (Oshchepkova et al., 2025; Xie et al., 2024).

From a theoretical perspective, this pattern is consistent with the displacement account (Hofferth, 2010), according to which excessive screen use may negatively affect language development by displacing cognitively and linguistically enriching activities such as shared reading, adult-child conversation, and verbally mediated play (Proekt et al., 2025; Rean et al., 2025; Zhenya et al., 2024). Such displacement may be particularly consequential during weekdays, when children's schedules are more structured and available discretionary time is limited. Under these conditions, prolonged screen exposure may directly compete with opportunities for sustained language-rich interaction.

At the same time, the absence of significant negative effects for moderate weekday exposure suggests that screen use does not necessarily undermine vocabulary development unless it reaches a level sufficient to substantially alter daily interactional routines. This finding is consistent with studies suggesting that moderate digital exposure may exert limited effects on lexical development while more strongly affecting higher-order language functions such as narrative coherence and discourse organization (Oshchepkova et al., 2025).

5.3. The Positive Association of Weekend Screen Time

In contrast to weekday exposure, higher weekend screen time was positively associated with passive vocabulary size: children in the highest weekend screen-time quartile demonstrated significantly higher passive vocabulary scores relative to the

lowest exposure group ($B = 6.25$, $\beta = .135$, $p = .037$), while the third quartile approached statistical significance ($p = .050$). Although initially counterintuitive, this finding is consistent with recent work emphasizing that the developmental implications of screen exposure depend critically on contextual characteristics, including content quality, parental mediation, and the social circumstances of use (Lo et al., 2024; Tulviste & Tulviste, 2024).

Weekends often provide qualitatively different family interactional contexts than weekdays. Compared to weekday media use, which may occur during periods of parental busyness or routine management, weekend screen engagement may be more likely to involve co-viewing, shared discussion, guided interaction, and exposure to educational content. From the perspective of mediated learning theory, such adult-supported digital experiences may function as contexts for linguistic mediation rather than passive consumption.

This interpretation is consistent with findings suggesting that parentally mediated digital interaction can facilitate vocabulary acquisition by promoting contextualized word learning, elaborative explanation, and conversational extension (Almazova et al., 2025). It is also possible that higher weekend screen exposure reflects broader patterns of parental involvement and access to cognitively stimulating digital resources (Gavrilova et al., 2025).

These findings further support the argument that screen exposure should not be conceptualized as a uniformly detrimental phenomenon. Rather, its developmental implications appear to depend on temporal context and the extent to which media use is embedded within socially interactive learning experiences.

5.4. Shared Reading as an Independent Predictor of Vocabulary Development

Although modest in magnitude, these effects remained significant after controlling for age and screen exposure. Consistent with prior research, both shared book reading ($B = 0.98$, $\beta = .086$, $p = .007$) and shared poetry reading ($B = 0.83$, $\beta = .069$, $p = .030$) made independent positive contributions to passive vocabulary size. The effect of conventional book reading is in line with extensive evidence identifying shared

reading as a robust predictor of lexical development (Dowdall et al., 2020; Galea et al., 2025). Although the observed effect size was smaller than those reported in some meta-analytic studies, this difference likely reflects the inclusion of age and screen exposure as simultaneous predictors, as well as the use of passive rather than expressive vocabulary as the outcome measure. Another plausible explanation concerns measurement specificity. The present study assessed reading frequency but did not capture qualitative dimensions of reading interaction, such as dialogic engagement, questioning strategies, or responsiveness to the child's contributions. Previous work suggests that these interactional features are particularly important for vocabulary growth (Muhinyi & Rowland, 2023; Zucker et al., 2013).

5.5. The Specific Role of Shared Poetry Reading

A particularly novel finding concerns the significant contribution of shared poetry reading. Although shared poetry reading was not significant in the age-controlled partial correlation analysis, it emerged as a significant predictor in the full regression model ($p = .030$), suggesting a possible suppression effect. This pattern may reflect a suppression effect, suggesting that the unique contribution of poetry reading becomes detectable only when variance shared with other home-language environment factors is statistically controlled.

From a theoretical standpoint, this finding supports the assumption that poetic language may provide distinctive developmental affordances. The rhythmic organization, repetition, rhyme, and heightened phonological salience characteristic of poetic texts may facilitate lexical encoding and retention through repeated structured exposure to salient linguistic forms. Such mechanisms are consistent with previous research linking poetic input to phonological awareness, verbal memory, and metalinguistic sensitivity (Lim & Chew, 2018; Read et al., 2019). It is also possible that shared poetry reading reflects specific parent–child interactional routines involving repetition, recitation, and playful verbal exchange. These practices may promote lexical consolidation through repeated retrieval and emotionally salient language use.

The present findings therefore suggest that poetry should not be treated merely as a peripheral variant of shared reading but rather as a potentially distinct form of

literacy input worthy of independent empirical consideration.

5.6. Integrating Shared Reading and Screen Exposure

Taken together, these findings support an ecological view of children's language development, suggesting that vocabulary growth is shaped by the dynamic configuration of literacy practices, media-use routines, and opportunities for adult-mediated interaction within the home environment (Bingham et al., 2017; Bronfenbrenner, 1979). The results suggest that the developmental significance of screen use cannot be fully understood without considering concurrent literacy practices, just as the effects of shared reading should be interpreted within the broader context of children's daily media ecology. By simultaneously modeling differentiated screen-time patterns and distinct forms of shared reading, the present study extends previous research that has typically examined these variables in isolation. The findings support the proposition that language development is shaped not by single environmental factors but by the configuration of interactional experiences available within children's everyday developmental contexts.

6. Conclusion and Implications

The present study contributes to the growing body of research examining children's language development within increasingly digitalized home environments. Consistent with previous findings, the results suggest that the relationship between screen exposure and vocabulary development is not uniform but depends on contextual characteristics of media use (Mustafaeva et al., 2025; Oshchepkova et al., 2025).

In particular, the differential associations observed for weekday and weekend screen exposure support context-sensitive ecological accounts of digital media use, according to which developmental outcomes depend not only on the duration of screen engagement but also on the temporal and interactional conditions in which it occurs (Johnson, 2010). The finding that only the highest level of weekday screen exposure was negatively associated with passive vocabulary is consistent with a threshold-based interpretation, suggesting that adverse effects may emerge primarily

under conditions of excessive and potentially displacement-inducing use.

At the same time, the positive associations observed for both shared book reading and shared poetry reading reinforce the central role of the home literacy environment in supporting lexical development. Although the association was numerically stronger for conventional book reading, both forms of shared reading made independent positive contributions to passive vocabulary outcomes, highlighting the importance of diverse literacy experiences in middle childhood.

Taken together, these findings suggest that children's vocabulary development is shaped by the broader configuration of literacy-related and media-related experiences within the home environment. Rather than focusing exclusively on limiting screen exposure, efforts to support language development should prioritize the quality and contextual organization of children's daily experiences, including opportunities for adult-mediated interaction and shared literacy activities.

More broadly, the present study underscores the need to move beyond purely quantitative indicators of screen time toward more nuanced models that account for contextual variation in media use. Future research should further examine how parental mediation, content characteristics, and interactional quality moderate the relationship between digital media exposure and language development across childhood.

7. Limitations and Suggestions for Future Research

Several limitations should be acknowledged. First, the cross-sectional design precludes causal inference. Longitudinal studies are needed to clarify developmental directionality. Second, screen exposure was assessed through parental self-report, which may be subject to recall bias and social desirability effects. Third, the study did not assess qualitative characteristics of either screen use or shared reading, including content type, parental mediation strategies, or child engagement. Future research should incorporate observational measures of interaction quality, distinguish between educational and entertainment-oriented digital content, and examine whether the effects of poetry reading are mediated by phonological awareness or verbal working memory.

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Compliance with Ethical Standards

Ethical Approval: All procedures performed in the study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

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Informed Consent: Informed consent was obtained from all the individual participants' parents included in this study.

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