Language Acquisition in Children: The Role of Parent-Child Interaction in English Vocabulary Development

Bassam Saideen[1,*]

Abstract: **Aims & Objectives**: Drawing on Vygotsky's Sociocultural Theory and Krashen's Input Hypothesis, which emphasize the roles of social interaction and meaningful input in language acquisition, this study investigates how English vocabulary development during early childhood is significantly influenced by parent-child verbal interaction. The study examines how different types of verbal engagement, such as storybook reading, casual conversation, and structured play, affect the rate and quality of vocabulary acquisition among young English learners. **Methodology**: A mixed-methods approach was employed, utilizing parental questionnaires, child language sample assessments, and observational data. The sample included 70 children (32 boys and 38 girls), aged 4 to 7 years, and their primary guardians, randomly selected from public schools and community centers in the Greater Binghamton area, New York, USA. **Findings**: Results showed that conversational play was associated with the highest average vocabulary score (115), followed by shared-book reading (105), with statistically significant differences ($p < 0.05$) across interaction types. Casual daily conversations, while frequent, resulted in lower vocabulary outcomes. **Recommendations**: These findings underscore the importance of cognitively engaging verbal activities in early language development and suggest practical strategies for parents and educators. In addition, this study lays a foundation for future studies on enhancing environments of home-based language learning.

Keywords: Verbal Interaction, vocabulary, acquisition, Practical recommendations, Shared-book reading.

اكتساب اللغة عند الأطفال: دور التفاعل بين الوالدين والطفل في تطوير المفردات الإنجليزية

بسام السعيدين[1,*]

الملخص: أهداف الدراسة: تبحث هذه الدراسة في تأثير التفاعل اللفظي بين الوالدين والطفل على تطوير المفردات الإنجليزية في مرحلة الطفولة المبكرة، بالاستناد إلى النظرية الاجتماعية الثقافية لفيجوتسكي وفرضية المدخل اللغوي لكراشن، واللتين تؤكدان على دور التفاعل الاجتماعي والمدخلات اللغوية ذات المعنى في اكتساب اللغة. تهدف الدراسة إلى تحليل تأثير أنماط مختلفة من التفاعل اللفظي، مثل قراءة القصص، والمحادثات اليومية العفوية، واللعب المنظّم، على سرعة ونوعية اكتساب المفردات لدى الأطفال المتعلمين للغة الإنجليزية. **المنهجية:** استخدمت الدراسة منهجية مختلطة، تضمنت استبيانات موجهة لأولياء الأمور، وتقييمات لعينات لغوية من الأطفال، بالإضافة إلى بيانات مبنية على الملاحظة. شملت العينة 70 طفلًا (32 ولدًا و38 فتاة) تتراوح أعمارهم بين 4 و7 سنوات، إلى جانب أولياء أمورهم، وقد تم اختيارهم عشوائيًا من مدارس عامة ومراكز مجتمعية في منطقة بنغهامتون الكبرى، نيويورك، الولايات المتحدة الأمريكية. **النتائج:** أظهرت النتائج أن اللعب التفاعلي ارتبط بأعلى متوسط في نتائج المفردات (115)، تلاه قراءة القصص المشتركة (105)، مع فروق ذات دلالة إحصائية ($p < 0.05$) بين أنواع التفاعل المختلفة. أما المحادثات اليومية العادية، فرغم شيوعها، فقد أسفرت عن نتائج أقل من حيث اكتساب المفردات. **التوصيات:** تؤكد هذه النتائج على أهمية الأنشطة اللفظية الغنية معرفيا في تنمية اللغة لدى الأطفال، وتقترح استراتيجيات عملية يمكن أن يستفيد منها كل من أولياء الأمور والمعلمين. بالإضافة إلى ذلك، تشكل هذه الدراسة الأساس للدراسات المستقبلية حول تعزيز بيئات التعلم اللغوي في المنزل.

الكلمات المفتاحية: التفاعل اللفظي، المفردات، الاكتساب، التوصيات العملية، قراءة الكتب المشتركة.

1 Department of English Translation, Faculty of Arts, Isra University, Amman, Jordan
* Corresponding author email: bassam.alsaideen@iu.edu.jo

1 قسم الترجمة الانجليزية، كلية الآداب، جامعة الاسراء، عمان، الأردن
* الباحث المراسل: bassam.alsaideen@iu.edu.jo

Introduction

The most critical stage of early child development is language acquisition. As the process through which children learn language, particularly vocabulary, language acquisition has received substantial interest in linguistic, cognitive, and developmental psychology. Numerous studies focus on specific factors that impact language development. One major factor is the parent-child relationship and the verbal interaction during infancy.

English serves as a global medium of social, academic, and professional communication (Al-Salman & Haider, 2021, 2024; Farghal & Haider, 2023; Haider, Alzghoul, & Hamadan, 2023). Research has examined the cognitive and pedagogical facets of early language learning across contexts and environments (Al-khresheh & Karmi, 2024; Al Shammari & Olaimat, 2018; Daoud & Abdulsalam, 2019; Al-Saideen et al., 2021). This study focuses on identifying which and how specific forms of parent–child interaction shape children's English vocabulary development (see Painter, 2017).

Shared book reading, among other modes of parent-child interaction, proves to have a positive relationship with vocabulary acquisition. The quality of interaction proved to be more significant than quantity in early vocabulary acquisition. Conversational play and shared book reading both exhibited high levels of engagement, generative questioning, and new vocabulary use. They proved to be highly effective in fostering children's language development when they were applied. Research also found that routine-based verbal interaction was not as effective in increasing children's vocabulary or their performance on the vocabulary pre- and post-tests, although it was helpful in their general linguistic input.

Tamis-LeMonda et al. (2019) note that interactions play an important role in language and cognitive development, which is enhanced through play between parents and their children. The researchers believe that playtime can be utilized as a form of practice in which parents offer new words, mimic language use, and extend the turn-taking interactions that foster vocabulary development. Rowe (2012) also argues that qualitative and quantitative aspects of speech are key elements in language acquisition. The study aims to show that when children are exposed to high-quality linguistic input during early parent-child conversational development, they will learn better as they grow, resulting in a richer vocabulary than other children.

Matychuk (2005) examined the case of child-directed speech that provides an understanding of how children are helped to develop language by speaking to them in certain ways. According to the study, there is a good reason as to why parents modify their speech depending on the child's level of understanding by using simple grammar and repeating key terms: this is because children acquire vocabulary in a structured manner.

Statement of the Problem

Vocabulary development during early childhood consistently proves to be crucial to language acquisition. While numerous studies have asserted that the needed linguistic input for language acquisition occurs through exposure to language in natural settings, few have assessed how different parent-child interaction types boost the process. The present study attempts to bridge this gap by examining interaction types and how they affect vocabulary development.

Significance of Study

Despite the substantial research on the topic, clarity is still missing regarding the varied impacts of the modes of parent-child interaction (e.g., instructional versus casual interactions or structured versus spontaneous exchanges) on the quality and rate of vocabulary acquisition. Bridging this gap in the literature enhances our understanding of how we can nourish an environment that is rich with linguistic input to support early child language acquisition by identifying interaction types that are most conducive to effective language learning.

The results of this study and the analysis of parent-child interaction types will equip parents and teachers with tools and insights to boost children's language development. To compare general parent-child verbal interactions and their impact on the English vocabulary acquisition, pre- and post-test analyses are conducted on the study participants. The tests were conducted to observe the impact of interventions on the study sample.

Aims of the Study

This study aims to:

– Analyze the different types of verbal interactions between parents and children and how they influence English vocabulary development.

– Determine which types of parent-child interactions contribute most significantly to the rate of English vocabulary acquisition.

– Investigate the qualitative impact of structured vs. spontaneous parent-child conversations on children's vocabulary growth.

– Explore the role of the frequency of interaction on the overall vocabulary development of children.

Therefore, the study attempts to answer the following questions:

1. What are the different types of parent-child verbal interactions, and how does each type influence the development of English vocabulary in children aged 3–7 years?

2. Which forms of parent-child interaction—structured or spontaneous—contribute most significantly to the rate and quality of English vocabulary acquisition?

3. How does the frequency of parent-child verbal interaction affect the overall English vocabulary development in early childhood?

Theoretical Background

The present study has been based on various theories of language acquisition and cognitive development. Indeed, one of the theoretical underpinnings of this study is Vygotsky's Sociocultural Theory of language development (Bester *et al*., 2019) that supports the belief that interactivity fosters cognition. For Vygotsky, children acquire their knowledge via interactions with and from other people who are more knowledgeable than they are, particularly the parents in the present learning situation.

The study also draws on Krashen's Input Theory. According to Stephen Krashen, the only way we can acquire language is by receiving comprehensible input. That is, we have to receive input that is just beyond our competence but not beyond our understanding. Input is an indispensable component in SLA (Abukhattala, 2013).

Another theory is Bruner's Theory of Language Acquisition (1973) and the conceptual framework that is supported by the Language Acquisition Support System. According to Bruner, actual communication with all surrounding people, particularly parent–child communication, with the help of special activities, is the necessary framework

that assists in language learning. His work is used in supporting a set of embodied practices, such as joint reading and storytelling, which this study assesses based on the extent of their contribution to vocabulary improvement.

The paper also adopts Bandura's Social Learning Theory (1971), which emphasizes observational learning and imitation. Language is not learned in isolation but is optimized through interactions where the child has the opportunity to observe and emulate.

Literature Review

Structured vs. Unstructured Parent-Child Interaction

Structured parent–child interactions proved to be highly effective in fostering language development, in both the quantity and quality of verbal exchange, as asserted by previous research. Rowe (2012) showed that rich linguistic input during structured conversations strengthens children's vocabulary over time, while Tamis-LeMonda *et al*. (2019) found that interactive play enhances both language and cognition through parental scaffolding. The researchers argue that turning playtime into practice during which parents offer new vocabulary items can enhance children's vocabulary development.

In contrast, and despite their frequent occurrences, routine-based verbal interactions were found to be less conducive to new vocabulary items or to generating elaborate responses. In the same vein, Christakis *et al*. (2019) reported that structures, language-rich interactions outperform routine exchanges in boosting language acquisition.

Quality vs. Quantity of Input

Recent research shifts focus from input quantity to quality. Matychuk (2005) and Rowe (2012) found that open-ended questions, vocabulary repetition, and tailored feedback best support children's language growth. Similarly, Seetal and Quiroz (2021) support this claim by demonstrating that training parents to use elaborative questioning and sentence expansion significantly improved children's vocabulary outcomes, even when interaction frequency remained unchanged.

Topping, Dekhinet, and Zeedyk (2013) also stressed the role of parent-infant interaction and pointed out that children's language development is related significantly to the quality of the early interactional experiences, including play. These interactions allow children to learn and practice new vocabulary items by providing a variety of exposure types and allowing the children to use those items in connected speech, which makes them easier to remember.

Shared Book Reading and Vocabulary Gains

Vocabulary learning is cited frequently as an area where shared book reading has a powerful potential role. Farrant and Zubrick (2012, 2013) found that joint attention during book reading enhances lexical acquisition by creating contexts where new words are embedded meaningfully. They contend that during shared book-reading, the achievement of increased lexical growth is related to increased focus of the parent-child interactions and the expanded opportunities for acquiring new words in meaningful contexts. They emphasize that continued book reading through different ages of childhood contributes significantly to the students' vocabulary growth during the school years.

This is supported by Gilkerson *et al*. (2017), who assert that book reading has a positive effect on the interaction between parents and their children, as it is a structured activity where the parents elect to use new vocabulary. Their study shows that in the period of child

development, children who read books have an increased frequency of the quantity of linguistic interactions and the desire to increase the scope and depth of interactions, which has an impact on word formation in children's speech.

On the positive effects of shared reading, cross-cultural findings have also been made. Chow, McBride-Chang, and Cheung (2010) investigated the impact of parental reading on children in Chinese families where English was taught as a foreign language. They discovered that shared reading in the first language enhanced second language and literacy development, remarkably so with regard to specific improvement in the child's second language vocabulary acquisition, due to this parent-child interaction process. In their study on rural Kenya, Knauer *et al*. (2020) affirmed that book-sharing interventions substantially augmented vocabulary acquisition; however, they drew attention to the fact that outcomes of the process depend on cultural and resource settings.

Influence of Socioeconomic and Environmental Factors

Socioeconomic status (SES) strongly shapes parent–child interaction. Justice *et al*. (2019) found that low SES limits linguistic opportunities and hinders vocabulary growth, prompting calls for targeted parental support in low-income communities for the purpose of augmenting their children's language development. Similarly, Li (2007) associates a higher educational and economic status of parents with richer home language environments. These findings are supported by Hart and Risley (1995), whose study was conducted on two sets of children who came from two extreme classes: power families and welfare families. The study analyzed the disparities in those children, and it was found that children from power families were more

associated with vocabulary richness and language growth than those from welfare families.
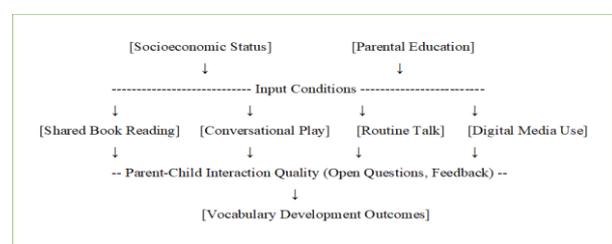
Contradictory Evidence and Methodological Variability

While most studies underscore the positive impact of interaction, some findings complicate the narrative. For instance, Seetal and Quiroz (2021) suggest that intensity of interaction, not just frequency (See Goodman, Dale & Li, 2008), is the key predictor, challenging assumptions in earlier work that equated more talk with better outcomes. Similarly, the success of book-sharing interventions in Kenya (Knauer *et al*., 2020) raises questions about generalizability, as such outcomes may not replicate in more resource-rich or culturally different contexts.

Synthesis and Conceptual Framework

Collectively, these studies suggest a multi-factor model of vocabulary development where SES and parental education shape the frequency and quality of specific interaction types (e.g., book reading, play, routine talk). These types of interactions impact language acquisition and vocabulary development, which are negotiated by the engagement quality, such as elaborate feedback, open-ended questioning, and contextual repetition.

The diagram below shows how these theories and the variables of the study are associated (e.g., SES, interaction type, frequency, and vocabulary outcome).

The diagram shows this framework visually, aligning theoretical constructs with empirical findings.

[Socioeconomic Status]   [Parental Education]
        ↓   ↓
--------------------------- Input Conditions ---------------------------
        ↓   ↓   ↓   ↓
[Shared Book Reading] [Conversational Play] [Routine Talk] [Digital Media Use]
        ↓   ↓   ↓   ↓
-- Parent-Child Interaction Quality (Open Questions, Feedback) --
                        ↓
            [Vocabulary Development Outcomes]

Methodology

Study Design

Employing a mixed-method approach, this study focused on three key parent-child interaction types: Shared book reading, interactions during play, most importantly, conversational, and conversations, mostly based on daily routine (e.g., mealtimes, getting ready for bed, etc.). The study aims to explore the impact of these types of interaction on children's vocabulary development, utilizing both quantitative and qualitative analyses. The study employs two methods for collecting data on interaction types: the first is a survey and a structured interview, and the other is observation and vocabulary assessment tools.

Participants

The sample consisted of 70 children (32 boys and 38 girls, as detailed in Table 1 below) aged 4-7 years and their legal guardians, most often the mother or father, who were randomly selected from public schools and community centers in the area of Greater Binghamton, New York, USA, during the period between August 2023 and March 2024. The selection was based on practical accessibility and guided by power analysis recommendations. Assuming a medium effect size (Cohen's d = 0.5), an alpha of 0.05, and 80% statistical power, a minimum sample size of 64 was required.

Table (1): Age, gender, and number of study participants.

Age	Male	Female
4	7	10
5	10	8
6	8	8
7	7	12
Total	32	38

Inclusion criteria

– Children aged 4 -7 years.

– Parents or legal guardians who speak English as a native tongue.

– Children who are monolingual in English.

Exclusion criteria

– Children with diagnosed speech or language impairments.

– Families where a language other than English is spoken at home.

The administrations of the schools and community centers were notified of the purpose of the study and the intention of contacting the children's parents by the researcher. Initially, 125 children were chosen, their addresses were obtained from schools and community centers, and their parents were contacted via mail. While some parents declined due to time limitations and work conditions, seventy-eight parents completed the interviews. The researcher excluded eight children (aged 4 and 5) from the study because they didn't meet the inclusion criteria. Some were excluded because of their unmanageable behavior during the study, which could have compromised the reliability and consistency of the data.

Validity, Reliability, and Objectivity

Validity: The study utilized the following strategies

Instrument validity: This was accomplished by using appropriate tools that measure vocabulary development and verbal interactions. The researcher compared these tools to already existing frameworks, such as Farrant and Zubrick (2013) and Tamis-LeMonda *et al*. (2019). The researcher also conducted a pilot study that included ten participating children with their parents.

To reduce internal validity threats, the activity of control worked on Socio-economic status, parents' educational level, and exposure to other language learning environments, such as school, media, etc.

Reliability and Objectivity

As for research credibility, the study only utilized well-documented procedures and

standardized measures. The questionnaires and the assessment tools were standardized across all subjects in the study. These were employed by studies such as Seetal and Quiroz (2021) and Chow *et al*. (2010).

Reliability of inter-rater was measured through the following:

– **Coding of parent-child interaction observations** was conducted by two independent coders who underwent training to ensure consistency. A level of inter-observer agreement of at least 0.8 was pursued using Cohen's Kappa coefficient.

– **The notion of test-retest reliability** was verified by carrying out a pilot experiment when the same respondents were evaluated twice within a two-week interval.

In order to neutralize researcher bias, double coding was used with the children's vocabulary output and observational data. In addition, double-blind coding was used in the study.

Ethical Considerations

Ethical standards were observed during the study. Approval was obtained from the Scientific Research Ethics Committee at Isra University. Consent was also obtained from parents and legal guardians prior to the interviews and tests. In addition, data confidentiality was guaranteed, participation was voluntary, and subjects were told they could withdraw at any time. All questionnaires and recordings were anonymized.

Data Sources

Two main data sources are used in this study:

1. **Parent-child interaction questionnaires**: Parent-child interaction questionnaires were utilized to gather data on the frequency, quantity, and quality of verbal interaction at the homes of the children under study. These

were used and validated by Tamis-LeMonda *et al*. (2019) and Farrant and Zubrick (2012).

2. **Child vocabulary assessment**: Peabody Picture Vocabulary Test-4th edition (PPVT-IV) was used to test subjects for receptive English vocabulary. In addition, a storytelling task was done for an expressive vocabulary check.

More demographic details were gathered about the parents' education, family income, as well as the child's experience in regular schooling and the use of computers and related devices.

Data Collection

Data collection took place in two phases that together took almost seven months to complete, from August 2023 to March 2024:

1. **Questionnaires and Surveys**: The parents were asked to fill out a standardized parents' form to report on the quantity, frequency, and quality of verbal interactions at home. The survey for collecting feedback on the SurveyMonkey website spanned 20-30 minutes, and respondents completed an online and a paper-based survey.

2. **Observations and Vocabulary Testing**: Brief checklists of task situation observation formed an important part of the assessment that took 30 minutes. This was done either through home visits or by using video recordings of parent-child interactions during play or reading. Subsequently, the child was given the Peabody Picture Vocabulary Test (PPVT-IV) as well as storytelling tasks that followed the test.

Every session was audio- and videotaped with permission from the parents for later analysis and coding. To ensure the confidentiality of participants, the recordings were made anonymous.

Discussion and Findings

The findings of this study show how different patterns of parent-child interaction can facilitate vocabulary acquisition in children aged between 4 and 7 years. In helping to answer the research questions, data from surveys, observations, and specific vocabulary tests were used as the basis for determining the correlation between the quality and quantity of verbal interactions and children's vocabulary development.

Types of Parent-Child Interactions and Vocabulary Development

Table 2 presents findings regarding shared book reading, conversational interactions during play, and routine-based conversations for child vocabulary scores.

Table (2): Relationship between Interaction Types and Vocabulary Scores.

Interaction Type	Average Vocabulary Score (PPVT-IV)	% of Total Verbal Interactions
Shared Book Reading	105	30%
Conversational Play	115	40%
Routine-Based Conversations	95	30%

Table 2 shows that children engaged most frequently in conversational play (40% of total interactions), followed by shared book reading (30%) and routine-based conversations (30%). Mean vocabulary scores were highest among children engaged in conversational play (M = 115), followed by shared book reading (M = 105) and routine-based conversations (M = 95).

The present study confirms the findings of previous studies, such as Tamis-LeMonda *et al*. (2019), who stressed the role of play contexts as cognitive stimulants for enhancing linguistic and cognitive development. Moreover, findings on shared book reading align with the work of Farrant and Zubrick (2012) and Gilkerson *et al*. (2017), which highlight the importance of such structured and focused verbal communication during free play and book reading for vocabulary learning. These activities proved to be more efficient for vocabulary development than routine-based conversations, which seem to lack the reflective thinking that is necessary for the task.

However, the findings of the present study refine previous results by demonstrating that interactive book reading, where parents use open-ended questions and elaborate feedback, is more impactful than book reading alone, supporting conclusions drawn by Seetal and Quiroz (2021).

A multiple linear regression analysis was conducted to examine the impact of different types of interactions on vocabulary development. Results indicated that conversational play was the strongest predictor of vocabulary growth ($\beta = 0.85$, $p < 0.01$, $R^2 = 0.72$), followed by shared book reading ($\beta = 0.78$, $p < 0.01$, $R^2 = 0.61$) and routine conversations ($\beta = 0.65$, $p < 0.01$, $R^2 = 0.42$). Effect sizes (Cohen's d) comparing conversational play versus routine talk were large (d = 1.02, 95% CI [0.48, 1.56]), suggesting a substantial practical impact.

Quality of Parent-Child Interactions

To measure the extent of interaction quality, the researcher looked at open and closed questions, elaborate feedback, and the diversification of new terms and conditions. The occurrence of these qualitative measures is displayed in Table 2 for each interaction.

Table (3): Quality Measures in Parent-Child Interactions.

Interaction Type	Use of Open-Ended Questions (%)	Elaborative Feedback (%)	New Vocabulary Introduced (words per session)
Shared Book Reading	45%	50%	12
Conversational Play	60%	65%	18
Routine-Based Conversations	30%	40%	7

Table 3 above shows that conversational play proved to be the best type of verbal interaction, with the highest percentages, generating 60% of open-ended questions, 65% elaborative feedback, and an average of eighteen new vocabulary items. Meanwhile, shared nook reading came second, and routine-based communication, although most frequent, was third. These results support the findings by Tamis-LeMonda *et al*. (2019) and Topping (2013), which highlight the significance of parent-child interactions for language development. They also show that the quality of such interactions proved to be enhancing.

Socioeconomic Status and Vocabulary Development

The influence of **socioeconomic status (SES)** on the quality and quantity of parent-child interactions was also examined, as shown in Table 4.

Table (4): Influence of Socioeconomic Status on Interaction Quality and Vocabulary Development.

SES Group	Average Vocabulary Score	Average Interaction Time (min/day)	% of Interaction Focused on Vocabulary
High SES	120	80	40%
Middle SES	110	60	35%
Low SES	90	45	25%

Children from high SES families achieved the highest average vocabulary scores (120), as shown in Table 4. The table also shows a significant difference in the time spent per day in interactions that are vocabulary-development based, in favor of children from high SES families, amounting to 80 minutes. Middle SES families' vocabulary scores ranged from 99-120, with an overall mean=110 and the interaction time = 60 minutes. On the other hand, low SES families achieved a comparatively lower vocabulary score of 90, and they engaged in language-related activities for only 45 minutes daily, 25% of which were focused on vocabulary. These findings support data from Justice *et al*. (2019) and Hart and Risley (1995), indicating that children from high SES backgrounds engage in more and in higher quality interactions, and are therefore exposed to richer vocabulary and learning products and become more linguistically developed than children from lower SES backgrounds, who may not have similar opportunities.

Stressing the quality of interaction, the study findings contradict Gilkerson *et al*. (2017), who prioritize quantity over quality of interaction. This finding supports emerging views that what matters more is how, not how often, parents talk to children.

These results are also supported by the independent-samples t-test, which revealed that children from high-SES families scored significantly higher on vocabulary tests (M = 120) compared to children from low-SES families (M = 90): $t(68) = 3.45$, $p < 0.01$, $d = 0.83$, 95% CI [0.30, 1.36].

Impact of Parent-Child Book Reading on Vocabulary Development

Specifically, a further analysis was conducted for the relationship between parent-child book reading and vocabulary. Table 5 shows that the students' reading habits and their vocabulary scores are also related.

Table (5): Frequency of Book Reading and Vocabulary Scores.

Frequency of Book Reading	Average Vocabulary Score
Daily (7 days/week)	125
Frequently (4-6 days/week)	115
Occasionally (1-3 days/week)	100
Rarely (less than 1 day/week)	85

Table 5 shows that children who engaged in daily book reading had significantly higher vocabulary scores (M = 125) than those who read occasionally or rarely (M = 85), as confirmed by an ANOVA analysis (F (3, 66) = 8.79, $p < 0.001$). Post-hoc comparisons (Tukey's HSD) indicated significant differences between daily readers and all other groups.

These results provide further evidence for the positive effects of shared book reading on vocabulary learning, as suggested by Gilkerson *et al.* (2017) & Farrant and Zubrick (2013). Regular book reading is a source of broader vocabulary and fosters an environment where new words are introduced and reinforced through repetition and elaborate discussion.

Table (6): Regression Analysis of Interaction Types and Vocabulary Development.

Predictor Variable	Regression Coefficient (β)	Standard Error (SE)	t-Value	p-Value	Correlation (r)	R²
Conversational Play	0.85	0.05	17.00	< 0.01	0.85	0.72
Shared Book Reading	0.78	0.06	13.00	< 0.01	0.78	0.61
Routine-Based Conversations	0.65	0.07	9.29	< 0.01	0.65	0.42
Socioeconomic Status (SES)	0.70	0.06	11.67	< 0.01	0.70	0.49
Book Reading Frequency	0.82	0.04	20.50	< 0.01	0.82	0.67

Table 6 shows that conversational play (β = 0.85) and book reading frequency (β = 0.82) are the most important factors influencing vocabulary development. Children engaged in frequent conversational play and regular book reading exhibit the highest vocabulary scores, explaining a large portion of the variance in language outcomes (R² = 0.72 and R² = 0.67, respectively). Shared book reading also plays a significant role in vocabulary development, but its influence is slightly lower (β = 0.78), accounting for 61% of the variation in scores. Routine-based conversations are still important but contribute less to vocabulary growth (β = 0.65, R² = 0.42), possibly because these conversations are less focused on expanding vocabulary and include more routine language. Furthermore, high socioeconomic status (SES) was also found to be impactful, accounting for 49% of vocabulary scores.

The study found that conversational play accounted for 40% and generated the highest vocabulary scores (115), followed by shared book reading (105). In routine-based conversations, the average vocabulary score was slightly lower (95). Conversational play had 60% open-ended questions and 65% elaborate feedback, and the number of new vocabulary items used in the session was 18 on average. The analysis of the shared book reading also revealed a very good quality of interaction, as 45% of the interaction was composed of open questions, and 12 new words were introduced in each session. Routine-based conversations produced the lowest scores regarding these indices, with only seven new words added to the conversation session scores.

Children from SES families had the highest average vocabulary scores (120) and spent significantly more time per day (80 minutes) in interactions focused on vocabulary development. Middle SES families' vocabulary scores ranged from 99-120, with an overall mean=110 and the interaction time = 60 minutes. Low SES families achieved a vocabulary score of 90 and engaged in

language-related activities for only 45 minutes daily. Children who had a daily book reading scored an average vocabulary of 125, while students who only read books occasionally scored an average of 85. As for book reading frequency, children who read four to six days a week scored a mean of 115 on their vocabulary acquisition (See Tomopoulos *et al.*, 2006).

Conclusions

The results of this study clearly showed that verbal interaction between parents and children is a critical factor in English vocabulary acquisition during early childhood, and that the quality of interaction exceeds its frequency in terms of influencing the development of language outcomes. Statistical analyses showed that conversational play and reading stories together contributed to achieving the highest averages in children's language performance, compared to normal daily conversations, which, despite their frequency, seemed to have a limited impact on enriching new vocabulary due to their lack of semantic and cognitive diversity. Socioeconomic status (SES) was also found to be highly influential regarding early childhood vocabulary development.

These results are consistent with the theoretical premises of both Vygotsky's cultural sociological theory and Stephen Krashen's linguistic input hypothesis, which assert that language acquisition occurs within interactive social contexts in which language is presented as a tool for thinking and communication, rather than as a material for indoctrination. Linguistic interaction based on understandable inputs and meaningful exchange is the ideal environment for building linguistic knowledge, by providing opportunities for children to engage in meaningful dialogue that promotes awareness of lexical, structural, and contextual use of language.

Future Research

To build on these findings, future research should:

– Develop and test parent-training interventions focused on fostering elaborative talk and engagement during daily routines.

– Explore the role of digital learning tools in enhancing or undermining interaction quality in home environments.

Study Limitations

These include the following:

– **Self-Report Bias**: Parent-reported interaction frequencies may be subject to social desirability bias, inflating the true levels of engagement.

– **Cross-Sectional Design**: The study captures a snapshot in time and cannot fully establish causality between parent-child interaction types and vocabulary growth.

– **Sample Characteristics**: Participants were drawn from a limited geographical region (Greater Binghamton, NY), which may affect the generalizability of findings to other populations.

Disclosure statement

– **Ethical Considerations:** Participation in the survey and interviews was voluntary, and informed consent was obtained from all participants. Responses were collected anonymously and treated with full confidentiality.

– **Data Availability Statement**: The data that support the findings of this study are available upon reasonable request.

– **Author contribution:** This paper was authored by one author.

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