



Investigating Early Vocabulary Acquisition on 18-24-Month-Old Child: A Study of Vocabulary Spurt and Function Words

¹Atika Salman Paris, ¹Zainal Rafli, ¹Fathiaty Murtadho, ²Huang Yan Wang

¹Applied Linguistics, Universitas Negeri Jakarta, Rawamangun Jakarta, Indonesia

²English Department Program, Can Tho University, Vietnam

*Corresponding Author e-mail: atika.salman@mhs.unj.ac.id

Received: January 2025; Revised: February 2025; Published: March 2025

Abstract

This study investigates vocabulary acquisition and the phenomenon of vocabulary spurt in a 24-month-old child, focusing on the interplay of cognitive abilities, memory, and understanding of word functions. The research aims to answer two primary questions: How do cognitive abilities and memory influence the vocabulary spurt in a 24-month-old child's vocabulary acquisition? And to what extent does understanding word functions contribute to vocabulary development in a 24-month-old child? Utilizing a single-subject case study design, observational sessions were conducted over four weeks, capturing the child's verbal interactions and spontaneous speech in a supportive home environment. Data analysis combined quantitative measures of new word acquisition and qualitative assessments of contextual word usage. Findings revealed a significant vocabulary spurt, with the child averaging 3.5 new words per week, characterized by peaks in word acquisition and a predominance of nouns, followed by verbs and adjectives. The child effectively utilized words for requests, labeling, and expressing emotions, demonstrating a growing understanding of syntax. Cognitive milestones, such as object permanence and categorization, alongside social influences from parent-child interactions, were pivotal in vocabulary growth. The study underscores the importance of rich, interactive environments for language development, highlighting how consistent exposure to language through routines and social engagement fosters vocabulary acquisition. These insights contribute to developmental linguistics by elucidating the cognitive and social processes that underpin early language development, emphasizing the need for supportive language-rich contexts in early childhood education.

Keywords: Vocabulary spurt; Cognitive development; Early language acquisition; Vocabulary spurt; Function words

How to Cite: Paris, A.S., Rafli, Z., Murtadho, F., & Wang, H.Y. (2025). Investigating Early Vocabulary Acquisition on 18-24-Month-Old Child: A Study of Vocabulary Spurt and Function Words. *Journal of Language and Literature Studies*, 5(1), 196-205. doi: <https://doi.org/10.36312/jolls.v5i1.2498>



<https://doi.org/10.36312/jolls.v5i1.2498>

Copyright© 2025, Paris et al

This is an open-access article under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) License.



INTRODUCTION

Vocabulary encompasses the range of words known and utilized by individuals in a language, forming the essential base for communication and language comprehension. It plays a pivotal role in children's language development, laying the groundwork for expressing ideas and thoughts clearly. As Gass (1988) argues, vocabulary development is a multifaceted process involving word recognition, recall, and contextual usage. Sotlikova (2023) further emphasizes that vocabulary encompasses more than just word meanings; it includes understanding contextual nuances, making vocabulary a critical component of language proficiency that enables coherent self-expression.

Vocabulary acquisition—the process through which individuals, especially children, acquire and expand their vocabulary—is fundamental in early developmental stages, providing the foundation for future language abilities. Muhsinin et al (2024)

highlight that social interactions and supportive language environments shape vocabulary acquisition in children. Social Learning Theory, as proposed by Hidayatullah et al (2022), complements these findings by suggesting that children acquire vocabulary through observation and imitation of language used by others in social contexts, reinforcing the importance of language-rich environments. Furthermore, Salomé et al (2024) reveal that vocabulary acquisition closely connects to cognitive abilities and language processing, supporting Piaget's (2005) theory of cognitive development, which states that vocabulary growth parallels cognitive maturation and the child's ability to process and apply new information. According to Olaru et al (2022) and Sumarni et al (2022) effective vocabulary acquisition includes recognizing, understanding, and using words across diverse situations. This aligns with Vygotsky's (1978) sociocultural theory, underscoring that language learning is an interactive process heavily influenced by social engagement and cognitive readiness.

A notable phenomenon within early vocabulary acquisition is the "vocabulary spurt," where children undergo a sudden and rapid increase in vocabulary between 18 and 24 months. Falé (2019) notes that children can substantially expand their lexicon during this period, supported by social contexts and language stimulation (Chow et al., 2019). According to Steber and Rossi (2020), the vocabulary spurt involves not only adding new words but also refining their functional use in communication, allowing children to employ vocabulary more effectively. Recent studies by Fung et al. (2023) and Gómez Díaz et al. (2024) underscore that this surge is closely tied to cognitive advancements and memory capacity, factors crucial to accelerated vocabulary acquisition. This finding aligns with theories of cognitive development, suggesting that memory and information-processing capabilities significantly influence vocabulary growth during this stage (Piaget, 2005).

Beyond vocabulary expansion, understanding word function—the role of a word in a sentence structure—is essential in a child's language development. Halliday (2019) notes that recognizing word function within daily communication aids children in constructing meaningful sentences. Tenney et al. (2019) add that word function is integral to comprehending relationships between words, a skill vital for effective language learning. Additionally, Allport (2022) suggests that grasping word function is essential for syntactic development, enhancing children's understanding of language structure. Cognitive development theory supports this by positing that as children's cognitive abilities mature, they increasingly understand word functions and relationships within sentences (Piaget, 2005). Hausser (2023) observes that mastering word function not only boosts verbal skills but also enhances children's capacity to process and understand complex information, linking word function understanding to broader cognitive processing abilities.

Prior research has provided insights into various facets of vocabulary acquisition and language development. Coffey and Snedeker (2024), for instance, studied how social interactions and environmental contexts accelerate vocabulary acquisition but did not explore how internal processes like memory and cognitive development drive vocabulary spurt in 24-month-old children. Flores et al (2020) focused on how contextual variation enriches vocabulary, particularly through exposure to diverse word uses, rather than specifically examining stages like the vocabulary spurt. Schmitt (2019) and McKeown (2019) highlighted teaching strategies for vocabulary enrichment, mainly for second-language learners and older children, leaving gaps in understanding vocabulary acquisition during early development. Teng (2019) discussed the role of cognitive processing and memory in vocabulary acquisition for adolescents, though these factors remain underexplored in 24-month-old children. Nguyen (2021) examined sociocultural factors in multilingual vocabulary acquisition, particularly among bilingual children, focusing more on multicultural than monolingual vocabulary development contexts.

This study aims to address these research gaps by investigating vocabulary spurt and word function in vocabulary acquisition in a 24-month-old child. Specifically, it examines how cognitive abilities, memory, and an understanding of word functions enhance the child's vocabulary use, aiming to provide new insights into the cognitive and social processes that underpin early language development. The research questions guiding this study are: How do cognitive abilities and memory influence the vocabulary spurt in a 24-month-old child's vocabulary acquisition? And to what extent does understanding word functions contribute to the development of vocabulary in a 24-month-old child? This research aspires to contribute to developmental linguistics, particularly in understanding how social and cognitive factors dynamically influence vocabulary growth during early language acquisition stages. The objectives of this study are to explore how cognitive abilities and memory impact the vocabulary spurt, and to examine how an understanding of word functions contributes to vocabulary development in a 24-month-old child.

RESEARCH METHOD

Research Design

The research design of this study adopts a single-subject case study approach, focusing on the language development and vocabulary spurt of a 24-month-old child within a supportive home environment. This design enables an in-depth examination of vocabulary acquisition by capturing detailed, context-specific insights into the child's language development process. The selection of a single case allows for a concentrated analysis of the child's verbal interactions within natural settings, contributing to a nuanced understanding of how language skills emerge and evolve in early childhood. The study also incorporates elements of Social Learning Theory, specifically focusing on how imitation and reinforcement within parent-child interactions contribute to vocabulary growth.

Research Instruments and Data Collection

The primary research instruments employed include observational methods, semi-structured interviews, and standardized assessment tools. Observational sessions are scheduled three times a week over four weeks, each lasting between 45 to 60 minutes, to document the child's spontaneous speech, verbal interactions, and word usage in everyday contexts such as playtime and meals. These sessions are designed to capture natural language usage, offering insights into how routine interactions shape vocabulary development. Semi-structured interviews with the child's parents are conducted at the beginning and conclusion of the study to gather information on the child's language exposure, daily routines, and the parents' perspectives on vocabulary growth. The MacArthur-Bates Communicative Development Inventories (CDI) is utilized as a standardized tool to objectively measure vocabulary size, categorize word types, and assess functional word usage. Additionally, vocabulary spurt indicators are employed to monitor the rate of new word acquisition throughout the study period.

Data collection involves triangulating observational data, interview responses, and standardized assessment outcomes to ensure a comprehensive understanding of the child's language development. Observational data are documented through detailed field notes and transcriptions, capturing instances of verbal interaction and word usage. Interview data provide contextual insights into the child's language environment and parental perceptions, while the CDI scores offer quantitative benchmarks of vocabulary size and usage patterns. This multi-method approach strengthens the reliability and depth of the data collected.

Data Analysis

Data analysis incorporates both quantitative and qualitative methodologies. Quantitatively, descriptive statistics are used to track the frequency and functional usage of new words, with CDI score comparisons conducted over the study period to identify vocabulary growth trends. Qualitatively, the analysis involves categorizing the transcribed words into thematic types, examining the situational context of word usage, and identifying patterns in language acquisition across different interaction settings. Thematic analysis of observational notes further elucidates how specific daily routines, such as play and meal times, contribute to vocabulary development. Ethical considerations are central to the research process, including obtaining informed consent from the parents, ensuring the confidentiality of data, and safeguarding the child's identity by using pseudonyms. Although the single-subject design limits the generalizability of findings, it offers rich, contextualized insights into early language development. Potential observer bias is acknowledged but addressed through the use of objective CDI assessments to complement qualitative observations.

RESULTS AND DISCUSSION

Results

Vocabulary Spurt: Rate and Patterns of Word Acquisition

The analysis of the CDI (MacArthur-Bates Communicative Development Inventories) data from the observational study of a young girl offers a detailed view of her word acquisition rate and patterns during a critical vocabulary spurt between 18 and 24 months. During this period, the girl significantly accelerated language acquisition, averaging approximately 3.5 new words per week.

Notably, her vocabulary growth displayed pronounced peaks, particularly in weeks 2, 4, and 5 and in weeks 10, 13, 18, and 22. During these peak weeks, her growth rate surged to around 43% above her average weekly rate, indicating periods of intensified language development. This pattern suggests that while her vocabulary growth was consistent, it also experienced specific bursts that contributed significantly to her cumulative word count. The following graph visually represents the vocabulary acquisition patterns outlined above, illustrating the cumulative vocabulary growth, weekly new words acquired, and growth rate fluctuations across the 18- to 24-month. To provide a clear representation of these trends, Figure 1 below outlines her weekly vocabulary growth, identifying both the average increases and the significant peak periods.

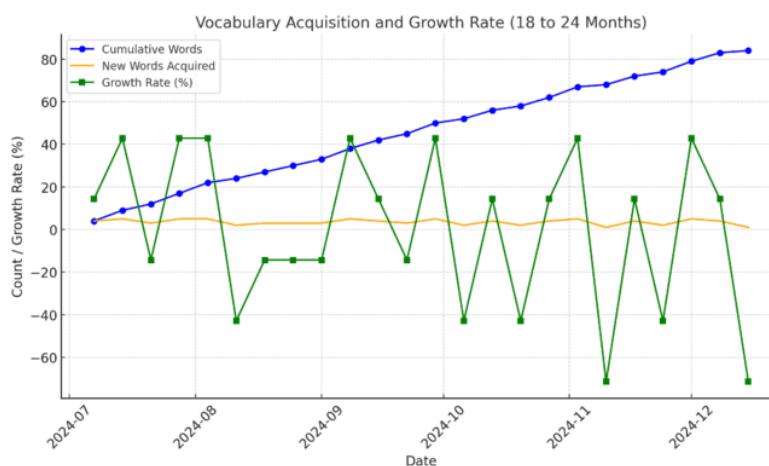


Figure 1. Graph of Vocabulary Growth Periods

The graph shows that the blue line representing cumulative words highlights a steady upward trajectory. In contrast, the orange line for new words acquired each week demonstrates these peaks of accelerated learning. The green line, which tracks the growth rate percentage, clearly marks the weeks of heightened acquisition, visually emphasizing the moments where her language acquisition sharply accelerated. This graphical representation aligns well with the observed vocabulary spurt, clearly illustrating the fluctuating yet progressive nature of language learning during early childhood.

The distribution of word types acquired

The analysis reveals distinct patterns in the types of words she acquired. Nouns dominated her vocabulary, comprising a significant portion of new words, primarily naming objects and people. Examples include “Mama,” “Ball,” and family names, which were among her earliest words. As her vocabulary expanded, verbs became more prominent, with words like “Eat,” “Run,” and “Jump” marking key milestones in her language development. By Week 22, pronouns such as “I,” “You,” and “He” began to appear, reflecting her understanding of social relationships. Table 1 illustrates the distribution of word types acquired during her spurt, detailing the proportions of nouns, verbs, adjectives, and other descriptors.

Table 1. The Distribution of Child’s Vocabulary Development

Week	Category	Word Types	Examples	Description	Age/ Months	Growth Rate (vs Weekly Average)
Week 2	Common Vocabulary	Nouns & Verbs	Mama, Ball, Drink, Run, Dog, Teeth, Sleep	Significant spurt in the mastery of nouns and verbs.	18	+60% (Big spurt)
Week 4	Object Names	Nouns	Book, Shoes, Car, Bag, Lamp, Table, Tree	Introduction of many new nouns, expanding object vocabulary.	18-19	+25 (Moderate spurt)
Week 5	People’s Names	Nouns	Mother, Grandmother, Uncle, Aunt, Sister, Father, Brother,	Naming close people with more variations.	19	+35 (Moderate spurt)
Week 10	Action Words	Verbs	Eat, Sleep, Walk, Swim, Run, Jump, Play	Introduction of verbs describing physical activities or actions.	19-20	+50 (Big spurt)
Week 13	Descriptive Words	Adjectives	Big, Small, Tall, Beautiful, Funny, Good, Soft	Child begins to use adjectives to describe objects or people.	20-21	+20 (Stable increase)
Week 18	Two-Word Sentences	Simple Sentences	Mama eats, Dad works, Child sleeps, Ball falls, I run	Child starts combining two words to form simple sentences.	21	+60 (Big spurt)
Week 22	Use of Pronouns	Pronouns	I, You, He, This, Mine, Yours	Use of personal pronouns begins to appear consistently.	22	+30 (Moderate spurt)
Week 24	Other Vocabulary	Adverbs	Swing, Shovel, Outside, Beach, Sun, School, Moon, Backyard, Water slide, Party, Flower, Tree, Sky, Park, Church, Zoo, Star, Rain, Home, Work, Snow, Pool, Garden, Store, Rock, House	Understanding and using words related to outdoor objects and locations.	23-24	+15 (Moderate spurt)

Discussion

Functional Use of Words

In analyzing the functional use of words in the child's language development, it was observed that the child adeptly utilized words across a range of functional contexts. For instance, words were employed to request objects or actions, such as saying “more juice” to indicate a need, or “help me” to solicit assistance. Labelling was another prominent function, with the child naming objects in their environment, such as identifying “dog” or “car.” Expressing emotions was also evident in the use of words like “happy” or “scared,” often paired with non-verbal cues like facial expressions to enhance communicative intent. These functional uses were further categorized into declarative (e.g., “It’s raining”), interrogative (e.g., “Where is the ball?”), and imperative forms (e.g., “Give it to me”), showcasing a diverse application of word functions in everyday contexts.

The child’s functional use of words strongly aligned with their syntactic development, reflecting a growing understanding of sentence structure and grammatical rules (Aizawa, 2021). For example, in declarative contexts, the child constructed simple sentences like “The dog is big,” demonstrating subject-verb-object agreement. Interrogative forms often included auxiliary verbs, such as in “Can I have it?” or “Is it there?”—indicating emerging complexity in syntax. Imperative sentences such as “Don’t touch!” or “Stop that!” showcased the child’s ability to use words dynamically within concise and direct structures. The findings show that the integration of functional word use with syntax development highlighted the child’s progression from single-word utterances to more complex sentence formations, illustrating their advancing linguistic competence. These findings are in line with Chow et al. (2019) who underscore the interconnected nature of functional word use and syntactic maturation in language acquisition.

Cognitive and Social Influences on Vocabulary Acquisition

The findings of the study reveal significant cognitive and social influences on the child’s vocabulary acquisition. From a cognitive perspective, the child demonstrated vocabulary growth in tandem with key developmental milestones such as object permanence and categorization. For instance, the ability to recognize that objects continue to exist even when out of sight supported the use of labels for objects that were not immediately visible, such as naming “ball” while pointing to its usual location. Categorization skills were evident as the child grouped words into meaningful clusters, such as identifying “dog” and “cat” under the broader category of “animals,” which facilitated more efficient memory and information processing. These cognitive advancements provided the foundation for the child’s expanding lexicon and their ability to retrieve and apply words appropriately in varied contexts.

Social factors played an equally vital role in the child’s vocabulary development. Parent-child interactions emerged as a critical influence (Flores et al., 2020), with parents frequently modelling language through labeling, questioning, and expanding upon the child’s utterances. For example, when the child said “car,” the parent responded with “Yes, that’s a red car,” providing reinforcement and introducing new vocabulary. Imitation was also a powerful mechanism, with the child often mimicking parental speech patterns and words during play or routine activities. Reinforcement, whether through verbal praise or repetition, further solidified word retention and usage. These findings align with Gomez Diaz et al (2024) who emphasize the importance of observation and imitation

in language acquisition. Moreover, they resonate with Vygotsky's sociocultural framework, which underscores the role of social interaction and the Zone of Proximal Development (ZPD). The study highlights how guided interactions, such as a parent scaffolding a conversation by asking open-ended questions, facilitated the child's ability to acquire and use new vocabulary effectively. Together, these cognitive and social influences underscore the dynamic interplay of internal processing and external interaction in the child's linguistic development.

Contextual Factors in Vocabulary Growth

The findings illustrate the significant role of contextual factors in the child's vocabulary growth, with environmental settings and routine activities serving as critical catalysts for word acquisition. Different settings, such as playtime and story reading, provided distinct opportunities for vocabulary development. During playtime, the child frequently encountered words related to objects and actions, such as "block," "jump," or "throw," often reinforced through interaction with caregivers who described ongoing activities. Story reading sessions, on the other hand, introduced a richer and more diverse lexicon, including descriptive and narrative terms like "big," "brave," and "castle." These activities exposed the child to new words and fostered comprehension by embedding them in meaningful and engaging contexts (Muhsinin et al., 2024; Hidayatullah et al., 2022). Situational factors, such as the caregiver's use of varied intonation during story reading or immediate feedback during play, enhanced the learning process by maintaining the child's attention and reinforcing connections between words and their meanings.

Routine activities also played a pivotal role in supporting vocabulary acquisition through repeated exposure to consistent contexts. For example, during mealtimes, the child regularly encountered and practiced words like "spoon," "milk," and "hot," as caregivers often labelled and commented on items and actions associated with the activity. This repetition in predictable scenarios facilitated word retention and application, as the child began to anticipate and use relevant vocabulary independently. Similarly, routines such as dressing and bedtime rituals consistently reinforced thematic words, such as "shirt," "pillow," and "sleep." The predictability and repetition inherent in these routines provided a stable framework for the child to associate words with specific contexts, leading to greater mastery and fluency. These findings underscore the importance of context-rich environments and routine activities in fostering vocabulary growth, highlighting how consistent and meaningful exposure supports the child's linguistic development.

Comparisons with Existing Literature

The findings of this study align closely with prior research on vocabulary development, particularly about vocabulary spurt and functional word use. Studies such as Gómez Díaz et al (2024) have emphasized the rapid acceleration in word acquisition during the early stages of language development, which was similarly observed in this study as the child transitioned from using single words to combining them in functional contexts. Furthermore, Hausser (2019) highlighted the significant role of functional word use in facilitating social interactions, a trend evident in this study as the child frequently employed declarative, interrogative, and imperative forms to engage with caregivers and navigate their environment. These parallels affirm the universality of key developmental trajectories in early language acquisition.

This study also offers novel contributions to existing literature, particularly by linking cognitive milestones and social interactions to vocabulary growth in a

comprehensive manner. While earlier research has addressed these factors independently, this study uniquely integrates them, demonstrating how cognitive achievements such as categorization and object permanence interact with social processes like parent-child interaction and imitation to drive vocabulary development. By combining these dimensions, the research advances our understanding of how internal and external influences work synergistically to shape language acquisition, offering a holistic perspective that bridges gaps in existing knowledge.

Limitations and Implications

Despite its contributions, the study has certain limitations that warrant consideration. While providing in-depth insights into one child's language development, the single-subject design introduces potential biases and limits the ability to generalize findings to broader populations. Observational methods, although valuable for capturing naturalistic language use, may have missed subtler aspects of the child's linguistic and cognitive processes that occur outside of the observed contexts. Additionally, the influence of external variables such as socioeconomic status or the linguistic diversity of the child's environment was not extensively examined, which could further affect generalizability.

These limitations highlight the need for future research involving larger and more diverse sample sizes and experimental designs that can control for external variables. Nonetheless, the findings have important implications for early childhood education and parental practices, emphasizing the need to foster enriched and interactive environments that support both cognitive and social dimensions of language learning. Future work can further elucidate the intricate processes underlying vocabulary acquisition and development by addressing these limitations and building on the study's contributions.

CONCLUSION

This study highlights significant patterns in vocabulary development in a child between 18 and 24 months, revealing a clear vocabulary spurt marked by accelerated word acquisition at specific intervals. Nouns initially dominated the vocabulary, followed by an increasing presence of verbs, adjectives, and pronouns as the child's language skills progressed. The child utilized words in various communicative functions, such as requests and labeling, and began forming simple sentence structures. Cognitive factors like object permanence and categorization, along with social influences such as parent-child interactions, played key roles in language growth. These findings underscore the importance of creating rich, interactive environments to support language development in early childhood. The study's implications stress the value of consistent, meaningful exposure to language through routines and social interaction, particularly for parents and educators.

RECOMMENDATION

Future research on vocabulary acquisition in early childhood should focus on several key areas to build upon the findings of this study. First, it is essential to include larger and more diverse sample sizes to enhance the generalizability of results across different socioeconomic and cultural backgrounds. Longitudinal studies would provide deeper insights into the trajectory of vocabulary development over time, while experimental designs could help control for external variables influencing language growth. Additionally, a more in-depth analysis of contextual factors, such as the differences between playtime and structured learning activities, could reveal effective language-learning strategies. Investigating the role of technology, peer interactions, and

multilingual environments in vocabulary acquisition is also crucial, as these elements are increasingly relevant in today's educational landscape. Furthermore, addressing barriers to language acquisition, such as limited access to language-rich environments and the impact of language disorders, can inform targeted interventions. Finally, integrating cognitive and social factors will provide a comprehensive understanding of how these dimensions interact to shape language development. By exploring these areas, future research can contribute significantly to our understanding of early language acquisition and inform practices that support children's linguistic growth.

REFERENCES

- Aizawa, T. (2021). Dynamic variation in receptive vocabulary acquisitions: Further evidence from the Young Lives study. *Cognitive Development*, 58, 101031.
- Alzahrani, S., & Roberts, L. (2021). The effect of visuospatial designing elements of zoomable user interfaces on second language vocabulary acquisition. *System*, 96, 102396.
- Coffey, J. R., & Snedeker, J. (2024). Disentangling the roles of age and knowledge in early language acquisition: a fine-grained analysis of the vocabularies of infant and child language learners. *Cognitive Psychology*, 153, 101681.
- Chow, J., Aimola Davies, A. M., Fuentes, L. J., & Plunkett, K. (2019). The vocabulary spurt predicts the emergence of backward semantic inhibition in 18-month-old toddlers. *Developmental Science*, 22(2), e12754.
- Falé, I. (2019). Vocabulary. In *The SAGE Encyclopedia of Human Communication Sciences and Disorders* (pp. 2069-2070).
- Flores, A. Z., Montag, J., & Willits, J. (2020). Using known words to learn more words: A distributional analysis of child vocabulary development. *arXiv preprint arXiv:2009.06810*.
- Fung, P., Pierre, T. S., Raja, M., & Johnson, E. K. (2023). Infants' and toddlers' language development during the pandemic: Socioeconomic status mattered. *Journal of Experimental Child Psychology*, 236, 105744.
- Gass, S. M. (1988). Second language vocabulary acquisition. *Annual Review of Applied Linguistics*, 9, 92-106.
- González-Fernández, B., & Schmitt, N. (2020). Word knowledge: Exploring the relationships and order of acquisition of vocabulary knowledge components. *Applied Linguistics*, 41(4), 481-505.
- Gómez Díaz, M., Fibla, L., Tsui, R. K. Y., & Byers-Heinlein, K. (2024). Testing theories of the vocabulary spurt with monolingual and bilingual infants. *Developmental Psychology*, 60(8), 1357.
- Halliday, M. A. (2019). Linguistic function and literary style: an inquiry into the language of William Golding's 'The Inheritors'. In *Essays in Modern Stylistics* (pp. 325-360). Routledge.
- Hidayatullah, H., Munir, S., & Tawali, T. (2022). Enhancing Vocabulary Mastery through Applying Visual Auditory Kinesthetic (VAK): A Classroom Action. *Journal of Language and Literature Studies*, 2(1), 43-52. <https://doi.org/10.36312/jolls.v2i1.721>
- Huckin, T., & Coady, J. (1999). Incidental vocabulary acquisition in a second language: A review. *Studies in Second Language Acquisition*, 21(2), 181-193.

- Hausser, R. (2023). Function Words. In: *Ontology of Communication*. Springer, Cham. https://doi.org/10.1007/978-3-031-22739-4_11
- Lee, P., & Lin, H. (2019). The effect of the inductive and deductive data-driven learning (DDL) on vocabulary acquisition and retention. *System*, 81, 14-25.
- McKeown, M. G. (2019). Effective vocabulary instruction fosters knowing words, using words, and understanding how words work. *Language, Speech, and Hearing Services in Schools*, 50(4), 466-476.
- Muhsinin, Arif Rahman, Ahmad Javed Hassan, & Said Malika Tridane Manu. (2024). The Use of Picture-Based English Materials to Improve Students' Vocabulary Mastery for States Elementary Schools. *Journal of Language and Literature Studies*, 4(1), 135–149. <https://doi.org/10.36312/jolls.v4i1.1795>
- Nguyen, N. T. T. (2021). A review of the effects of media on foreign language vocabulary acquisition. *International Journal of TESOL & Education*, 1(1), 30-37.
- Olaru, G., Robitzsch, A., Hildebrandt, A., & Schroeders, U. (2022). Examining moderators of vocabulary acquisition from kindergarten through elementary school using local structural equation modeling. *Learning and Individual Differences*, 95, 102136.
- Piaget, J. (2005). *Language and thought of the child: Selected works* (Vol. 5).
- Salomé, F., Commissaire, E., & Casalis, S. (2024). Contribution of orthography to vocabulary acquisition in a second language: Evidence of an early word-learning advantage in elementary-school children. *Journal of Experimental Child Psychology*, 246, 105978.
- Schmitt, N. (2019). Understanding vocabulary acquisition, instruction, and assessment: A research agenda. *Language Teaching*, 52(2), 261-274.
- Steber, S., & Rossi, S. (2020). So young, yet so mature? Electrophysiological and vascular correlates of phonotactic processing in 18-month-olds. *Developmental Cognitive Neuroscience*, 43, 100784.
- Sotlikova, R. (2023). The Presentation-Practice Route to Teach Vocabulary to Young Learners: A Casa Study at International Schools in Uzbekistan. *Journal of Language and Literature Studies*, 3(1), 67–79. <https://doi.org/10.36312/jolls.v3i1.1172>
- Sumarni, B., Bhatta, D. D., & Kho, S. F. C. (2022). The Use of Total Physical Response in Teaching Vocabulary Integrated with Meaningful Classroom Interaction. *Journal of Language and Literature Studies*, 2(1), 23-32.
- Teng, F. (2019). The effects of context and word exposure frequency on incidental vocabulary acquisition and retention through reading. *The Language Learning Journal*, 47(2), 145-158.
- Tenney, I., Xia, P., Chen, B., Wang, A., Poliak, A., McCoy, R. T., ... & Pavlick, E. (2019). What do you learn from context? Probing for sentence structure in contextualized word representations. *arXiv preprint arXiv:1905.06316*.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes* (Vol. 86). Harvard university press.
- Zhang, Z., & Huang, X. (2024). The impact of chatbots based on large language models on second language vocabulary acquisition. *Heliyon*, 10(3).