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Psycholinguistic Factors Influencing Vocabulary Acquisition in Young Learners

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Abstract. :This study explores the psycholinguistic factors that influence vocabulary acquisition in young learners, focusing on the roles of working memory, phonological processing, and attentional control. Using a qualitative descriptive design, data were collected through classroom observations, interviews, and language task analysis involving children aged 6–8. The findings reveal that vocabulary learning is shaped by the interaction of these cognitive mechanisms rather than exposure alone. Children with stronger working memory retained new words more effectively, while those with higher phonological awareness encoded and retrieved sound patterns with greater accuracy. Attentional control further contributed to how deeply learners processed linguistic input, significantly affecting their ability to understand and store new vocabulary. The results demonstrate that vocabulary acquisition is a dynamic cognitive process dependent on individual differences in memory, sound processing, and attention. These insights highlight the need for instructional practices that address learners' cognitive profiles and support more effective vocabulary development in early education.

Keywords: vocabulary acquisition, psycholinguistics, working memory, phonological processing, attentional control, young learners

1. INTRODUCTION

Vocabulary acquisition in young learners has long been recognized as one of the foundational building blocks of early language development, shaping not only their communicative competence but also their broader academic trajectory (Sun & Yin, 2020). A child's ability to understand and produce words is closely tied to cognitive growth, literacy readiness, and overall educational success. Because vocabulary functions as the gateway to comprehension, reasoning, and the expression of ideas, any factor that influences how children acquire and process lexical items becomes crucial to investigate. In psycholinguistics, vocabulary learning is not treated merely as a linguistic phenomenon; rather, it is viewed as an intricate cognitive activity shaped by the dynamic interaction between internal mental processes and the linguistic environment surrounding the learner (Purba, 2018). Young learners, who are still developing cognitively, neurologically, and socially, present a unique context in which vocabulary acquisition is deeply intertwined with psycholinguistic mechanisms that operate differently compared to older learners or adults (Setyawan & Karyoto, 2024).

Children engage with language through a blend of perceptual sensitivity, cognitive curiosity, and emerging mental frameworks that allow them to form connections between sounds, meanings, and contexts (Saul, 2025). Central to this developmental process is the way

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their minds encode, store, and access new words. Psycholinguistic perspectives highlight that these processes are far from automatic; they depend heavily on components such as working memory capacity, phonological awareness, attentional control, and the formation of mental lexicons (Steinberg & Sciarini, 2006). Working memory, for instance, determines how effectively children can hold new phonological sequences long enough to make meaningful associations. When a child encounters an unfamiliar word, their capacity to remember its sound pattern and relate it to a concept is contingent on how efficiently their working memory functions in that moment (Abdeldayem & Elmesalamy, 2025). This is especially important for young learners who often acquire vocabulary through incidental exposure rather than explicit instruction.

Another essential component is phonological processing, which encompasses the ability to recognize, differentiate, and manipulate sounds within words. Young learners rely on phonological awareness to encode auditory input and to gradually form stable phonological representations. These representations serve as anchors in the developing mental lexicon, enabling children to link sound patterns with semantic information (Nkurunziza, 2024). Children with stronger phonological processing skills tend to acquire vocabulary more rapidly because they can more easily break down, compare, and recall phonological units. Additionally, their sensitivity to rhythm, stress, and intonation in spoken language assists in distinguishing new words and understanding their communicative functions. The cognitive ability to perceive and segment speech therefore acts as a bridge between auditory input and lexical learning (Burleson & Souza, 2022).

Attention also plays a critical role (Cicekci & Sadik, 2019). Young learners are constantly navigating a world filled with linguistic stimuli, but their attentional capacities determine which elements of language they notice, internalize, and eventually acquire. Since children learn vocabulary in rich and often unpredictable environments, their ability to maintain focus on relevant linguistic cues becomes a decisive factor in word learning (Batu, 2024). Attention influences how deeply children process language input and how successfully they encode new vocabulary items into long-term memory. Without adequate attentional control, meaningful input may pass unnoticed, even in linguistically stimulating settings (Crespo & Kaushanskaya, 2022).

These internal factors interact with external conditions such as the nature of linguistic input, interactional patterns, and the quality of instructional support. Young learners acquire vocabulary not only through direct explanation but also through repeated exposure, social interaction, storytelling, play-based learning, and multimodal stimuli. The richness of the

child's linguistic environment characterized by frequency, variety, and meaningfulness of words can either enhance or hinder vocabulary growth. Children who are consistently exposed to diverse lexical items in meaningful contexts are more likely to form strong semantic networks, making it easier for them to retrieve and use words appropriately. Additionally, interactions that involve scaffolding, expansion, and responsive dialogue have been shown to boost children's lexical development by encouraging deeper cognitive processing (Surya & Aprilia, 2024).

Despite the substantial research on vocabulary learning, there remains a gap in understanding the precise ways in which psycholinguistic factors intertwine to shape young learners' lexical development. Much existing literature tends to isolate variables, examining phonological awareness, memory, or attention independently. Yet vocabulary acquisition is influenced by the collective functioning of these mechanisms, which do not operate in isolation. Exploring how these factors interact provides a more holistic understanding of why some children acquire vocabulary more efficiently than others, even when exposed to similar learning environments. Furthermore, research in early educational contexts, particularly in EFL or multilingual settings, is still limited in addressing how psycholinguistic processes support or constrain vocabulary learning during the formative years of language development.

Understanding these interconnected processes is critical for informing the design of effective pedagogical practices. Early childhood educators often focus on presenting new words or encouraging repetition, but without awareness of the underlying cognitive processes that support word learning, instructional efforts may not fully align with children's developmental needs. A deeper analysis of the psycholinguistic aspects of vocabulary acquisition offers valuable insights into how learning materials can be structured, how interactional strategies can be optimized, and how learners with varying cognitive profiles can be supported. Such insights contribute not only to improving teaching effectiveness but also to ensuring that vocabulary development is grounded in principles that reflect the realities of children's cognitive capacities.

Through examining the major psycholinguistic mechanisms that contribute to vocabulary acquisition in young learners, this article seeks to provide a clearer and more integrated explanation of the cognitive underpinnings of lexical development in early childhood. By situating vocabulary learning within a psycholinguistic framework, it becomes possible to understand both the strengths and vulnerabilities in young learners' language processing systems and to illuminate pathways through which vocabulary growth can be more effectively supported in educational settings.

2. RESEARCH METHOD

This study employs a qualitative research approach to gain an in-depth understanding of how psycholinguistic factors shape vocabulary acquisition among young learners. A qualitative approach is appropriate because the research centers on the processes, behaviors, and cognitive patterns that underlie children's learning experiences elements that cannot be fully captured through numerical data alone (Creswell & Creswell, 2017). By observing learners within natural learning contexts and examining their verbal responses, attention patterns, and memory-related behaviors, this study seeks to reveal how internal cognitive mechanisms support or constrain early lexical development.

A descriptive research design is used to document and interpret phenomena as they occur naturally, without manipulation of variables. This design enables the researcher to present a comprehensive picture of how young learners process, store, retrieve, and apply new vocabulary while interacting with environmental input and instructional activities. Rather than testing hypotheses, the study aims to describe the interplay among memory, phonological processing, and attention as evidenced in children's everyday learning behavior.

Participants in the study consist of children aged 6–7 who are enrolled in early primary education. This age group is selected through purposive sampling because it represents a critical developmental period for language growth and provides rich opportunities to observe vocabulary acquisition in action. Classroom teachers are also included as secondary participants to provide contextual insights regarding students' language behaviors and learning dynamics. Their perspectives support the interpretation of observational findings and offer valuable information regarding instructional practices that influence vocabulary development.

Data collection involves three primary techniques: observation, interviews, and language task analysis. Observations are conducted during vocabulary learning activities to capture linguistic behaviors such as word recall, responsiveness to phonological cues, sustained attention, and spontaneous strategies used when encountering new words. These observations are non-participatory, allowing the researcher to document natural interactions and responses without interfering with classroom routines. Field notes include verbal expressions, nonverbal cues, instances of successful or unsuccessful word retrieval, and patterns of errors.

Semi-structured interviews are conducted with classroom teachers to explore their views on students' language processing abilities, attention patterns, and typical approaches to

vocabulary instruction. Short, informal interviews are also held with children to better understand how they perceive new words, how they form associations between words and objects or experiences, and how they describe their thought processes while learning vocabulary. The flexible nature of these interviews ensures that children feel comfortable and able to express their experiences without pressure.

In addition, language task analysis is used to directly assess indicators of psycholinguistic functioning. Children are asked to perform tasks such as repeating newly introduced words, identifying initial sounds, grouping words based on semantic categories, and recalling vocabulary after a brief delay. These tasks are designed to elicit evidence of working memory capacity, phonological sensitivity, and selective attention within a vocabulary-learning context. The outcomes of these activities provide insight into how children encode, retain, and integrate new lexical items into their developing mental lexicon.

Data analysis proceeds through processes of data reduction, data display, and conclusion drawing. Observation notes, interview transcripts, and task results are coded and organized according to themes related to working memory, phonological processing, and attention. An inductive analytical approach is employed to allow meaningful patterns and relationships to emerge from the data rather than imposing rigid theoretical categories. This allows the researcher to generate interpretations grounded in the realities of classroom learning and reflective of children's natural linguistic behaviors. To enhance the validity of the findings, source triangulation is employed by comparing data obtained from observations, interviews, and language tasks. Member checking is conducted with classroom teachers to confirm whether the interpretations align with real classroom conditions. Documentation, including field notes, audio recordings, and task sheets, is maintained to ensure transparency in the analytic process and to support the credibility of the research.

Through this methodological approach, the study aims to present a holistic account of how internal psycholinguistic mechanisms operate during young learners' vocabulary acquisition. By observing children in their authentic learning environments and examining the cognitive processes that surface through their responses and behaviors, the research provides a richer understanding of how vocabulary development unfolds in early childhood and how various cognitive factors interact to support or hinder lexical growth.

3. FINDING AND DISCUSSION

The findings of this study show that vocabulary acquisition in young learners is fundamentally shaped by the interaction of several key psycholinguistic factors particularly working memory, phonological processing, and attentional control which operate simultaneously throughout the learning process. Observations, interviews, and language tasks consistently revealed that children do not acquire vocabulary merely by exposure or repetition; instead, their success depends on how effectively these internal cognitive systems function as they engage with new linguistic input in the classroom. The data highlight that the interaction among these factors creates distinct learning patterns, which can be clearly observed in children's behavior, their ability to recall and reproduce new words, and their strategies for connecting vocabulary to meaning.

One major finding revolves around the role of working memory. Children who demonstrated stronger working memory abilities were consistently more successful in tasks that required temporarily holding unfamiliar words before linking them to meaning. During vocabulary lessons, these children were able to repeat multisyllabic or unfamiliar words after minimal exposure, indicating a more efficient ability to store and manipulate phonological information. For instance, words such as *"caterpillar," "kangaroo,"* or *"adventure,"* which often posed difficulty for children with lower memory capacity, were repeated correctly and retained over time by those with stronger memory span. Moreover, in follow-up tasks conducted several minutes after initial exposure, these children were more likely to recall the words without cues, suggesting that working memory was a crucial gateway to establishing longer-term lexical representations. Conversely, learners with weaker working memory often forgot parts of the words, distorted syllables, or replaced unfamiliar sounds with more familiar ones. For example, *"caterpillar"* became *"cat-pillar"* or *"pillar-cat,"* showing an attempt to restructure the word into manageable fragments because their working memory struggled to hold the complete phonological form.

Another key finding concerns phonological processing. Children who were able to identify individual sounds, break words into syllables, or detect rhyming patterns acquired vocabulary at a noticeably faster rate. In classroom observations, these learners quickly recognized similarities between new words and previously learned ones, which helped them encode and map sound patterns more efficiently. For example, when introduced to the word *"tiger,"* children with strong phonological awareness promptly associated it with familiar words such as *"time"* or *"top"* because of the shared initial sound. Similarly, when asked to segment a word like *"banana"* into syllables, they could easily produce *"ba–na–na,"* showing that their sensitivity to sound structures enabled deeper processing. These phonological skills

allowed them to repeat words more accurately, store them more consistently, and retrieve them with greater ease. In contrast, children with weaker phonological abilities often experienced difficulty distinguishing similar sounds, leading to mispronunciations or confusion between words with overlapping phonological forms. A common example observed was the mixing of words such as *"ship"* and *"sheep,"* where children relied more on visual cues or semantic context to differentiate them because their internal phonological mapping was not yet well developed.

Attention also emerged as a powerful determinant of vocabulary learning (Kinasih, 2020). Children who maintained focus during storytelling, picture-based activities, or word games accumulated vocabulary more effectively because they were able to notice linguistic cues, interpret contextual meaning, and process auditory input without frequent disruption. During picture-naming tasks, for instance, these children showed strong engagement by pointing at objects, asking clarifying questions, and verbally rehearsing new words. Their sustained attention allowed them to absorb not just the pronunciation of the word but also the associated visual image and contextual meaning, which strengthened their semantic connections. On the other hand, children who were easily distracted either by peers, classroom noise, or their own impulses processed only fragments of the presented information. This led to incomplete or inaccurate vocabulary storage. An example frequently observed was the inability of distracted children to remember the meaning of a word immediately after hearing it, even if they had repeated it moments earlier. Their learning difficulties did not stem from an inability to speak or understand language, but from the insufficient depth of processing caused by reduced attentional engagement.

Importantly, the findings also show how these three psycholinguistic factors interact rather than act in isolation. For example, children with strong working memory but weak phonological processing had difficulty retaining new words accurately even though they could remember sequences. They often produced approximations of words, indicating that working memory alone could not compensate for limited phonological access. Similarly, some children displayed good phonological skills but struggled to focus during lessons, which caused inconsistencies in their learning outcomes. They could segment or manipulate sounds during structured tasks, yet they failed to acquire new vocabulary presented within stories or discussions because their attentional lapses prevented deeper encoding. The most successful vocabulary learners were those who possessed a balanced combination of strong working memory, refined phonological sensitivity, and the ability to sustain attention throughout learning activities.

The findings also highlight differences in strategy use among learners. Children with more developed cognitive systems tended to rehearse new words verbally, imitate the teacher's intonation, or repeat them softly to themselves. They also used visual cues—such as images in books or gestures from teachers—to strengthen semantic associations. Meanwhile, children with weaker cognitive resources relied heavily on guessing or imitation without fully processing the sound or meaning of the word. This difference in strategy use reflects the underlying psycholinguistic capacities that support vocabulary development.

Additionally, teacher interviews supported the observed patterns. Teachers consistently noted that children who pay close attention, respond quickly to verbal instructions, and show interest in sound-based activities generally expand their vocabulary more steadily. They also reported that children who struggle with remembering instructions or differentiating similar-sounding words often face ongoing challenges with vocabulary growth. Teachers' perspectives confirmed that these psycholinguistic factors are visible in everyday classroom interactions and have a measurable impact on children's progress.

Overall, the findings demonstrate that vocabulary acquisition in young learners depends on a dynamic interdependence of cognitive mechanisms rather than simple exposure or repetition. Working memory supports the temporary storing and manipulation of novel words, phonological processing allows children to analyze and encode sound structures, and attentional control ensures deep and meaningful processing. When these factors function efficiently together, vocabulary learning becomes a smoother and more successful process. Conversely, limitations in any of these areas can slow down or complicate the acquisition of new words, even in rich language environments. These results underscore the need to view vocabulary learning not merely as an instructional challenge but as a cognitive process shaped by individual differences in psycholinguistic functioning.

4. CONCLUSION

The findings of this study demonstrate that vocabulary acquisition in young learners is a cognitively complex process shaped by the interplay of working memory, phonological processing, and attentional control. These three psycholinguistic factors do not operate in isolation; instead, they influence and reinforce one another throughout the learning process. Children who possess stronger working memory can retain and manipulate new lexical items more effectively, enabling them to recall words even after limited exposure. Meanwhile, those with well-developed phonological processing skills show greater sensitivity to sound

structures, which allows them to encode, rehearse, and retrieve vocabulary with greater precision. At the same time, attentional control determines how deeply children engage with linguistic input, influencing the extent to which new words are noticed, processed, and integrated into their mental lexicon.The study further highlights that differences in vocabulary acquisition cannot be attributed solely to instructional factors but are deeply rooted in individual cognitive profiles. Learners who exhibit balanced strengths across these psycholinguistic domains demonstrate faster, more consistent vocabulary development, while those with limitations in one or more areas face challenges that persist even in highly supportive learning environments. These findings underscore the importance of recognizing vocabulary learning as an individualized cognitive experience rather than a uniform instructional outcome.For educators, the results emphasize the need to design instructional practices that align with children's cognitive capacities. Activities that support memory retention, enhance phonological awareness, and promote focused engagement can create more equitable learning conditions and help bridge differences in learners' cognitive profiles. Overall, this study reinforces the notion that successful vocabulary acquisition in young learners requires a holistic understanding of the cognitive processes that guide language development, thereby offering valuable insights for both psycholinguistic research and early language education.

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