# THE ROLE OF WORKING MEMORY IN LANGUAGE LEARNING: ENHANCING VOCABULARY, GRAMMAR, AND COMPREHENSION IN EFL LEARNERS

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***Abstract:*** *The importance of working memory in language acquisition is examined in this article, with a focus on English as a Foreign Language (EFL) learners. Working memory facilitates vocabulary retention, grammar comprehension, and reading and listening comprehension. Strong working memory learners typically attain higher levels of language competency, according to research, whereas learners with weaker working memory may struggle with processing and retention. The article covers technology tools to improve working memory as well as instructional tactics for these learners, including chunking, visual aids, and spaced repetition. Improved language acquisition results for EFL learners can result from teaching strategies that prioritize working memory.*

***Keywords*** *: Working memory, language learning, EFL learners, vocabulary retention, grammar processing, chunking, visual aids, digital tools, language proficiency, syntax comprehension.*

## Introduction

A crucial cognitive mechanism that enables people to temporarily store and manage information is working memory. Working memory is crucial for processing, remembering, and using new language abilities in the context of language learning, particularly for those learning English as a foreign language (EFL). It helps students to understand grammar principles, retain vocabulary, and follow intricate sentence

patterns while simultaneously making sense of written and spoken language in real time. Because they can better handle the cognitive demands of learning a new language, students with stronger working memory capacities frequently perform better in language acquisition, according to research. However, it may be difficult for those with low working memory to retain information, comprehend intricate systems, and absorb language fluently. This article examines how working memory affects vocabulary acquisition, grammatical understanding, and reading and listening abilities, among other areas of language learning. It also gives teachers ways to help students with different working memory capacities, emphasizing methods like chunking, visual aids, and using technology to improve learning results. Teachers can design more effective learning environments that meet the various demands of EFL learners by comprehending and addressing the importance of working memory.

The cognitive capacity to store and manipulate information for brief periods of time is known as working memory, and it is essential for language processing. In language learning, working memory enables learners to retain vocabulary, decipher sentence structures, and comprehend ongoing conversations. Effect on vocabulary retention: students who have a larger working memory capacity are able to remember more words and recall them more precisely, whereas students with a less capacity may have trouble retaining vocabulary. Working memory aids learners in storing and retrieving new vocabulary words. Grammar and Syntax processing: because it enables learners to retain sentence fragments while deciphering meaning, working memory is crucial for comprehending intricate grammatical structures. Learners that have stronger working memory are better able to understand and apply grammatical rules to longer, more complicated sentences. Function in reading and listening comprehension: working memory enables students to retain information across sentences and paragraphs, which helps them comprehend context and meaning. In listening, it helps students recall the beginning of a sentence or phrase so they can comprehend its entire meaning by the end. Problems for students with limited working memory: EFL students who have a smaller working memory

capacity may experience problems remembering vocabulary, losing track of sentence elements, and dealing with information overload. These issues can cause them to learn the language more slowly and become less proficient overall. Instructional methods to enhance working memory: chunking: students can better process and retain language content when information is divided into smaller, more manageable chunks. Visual Aids: charts, diagrams, and pictures can aid strengthen memory and lessen cognitive burden. Spaced Repetition: by going over material periodically, learners can improve retention and progressively commit linguistic components to long-term memory. Practice and repetition: by assisting students in internalizing linguistic patterns, regular practice frees up working memory for more complex processing. Technology and working memory support: interactive technologies, such as virtual reality or language games, provide immersive environments that engage working memory in meaningful language practice. Digital tools and apps that are intended to improve working memory, such as brain-training games or adaptive language-learning platforms, can boost cognitive capacity and support language acquisition. Implications for teachers of language: by comprehending the function of working memory in language acquisition, teachers can create lessons that are easier for students with different cognitive abilities to understand. By modifying classes to accommodate working memory constraints, educators can create a more welcoming and encouraging learning environment, which will improve language acquisition results for all students.

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