

**SHORT-TERM MEMORY AND LISTENING CHALLENGES IN
SECOND LANGUAGE ACQUISITION**

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Abstract:

In learning any language, short-term memory (STM) plays a critical role in processing spoken input. Language is a complex cognitive system deeply embedded in everyday life, yet our understanding of STM's exact role in language comprehension remains limited. STM temporarily stores phonological, lexical, and syntactic information long enough to allow for real-time sentence interpretation. However, its limited capacity presents challenges when processing unfamiliar or rapidly presented linguistic sequences in a second language.

Comprehending a second language in real time is cognitively demanding, as listeners must hold and integrate unfamiliar sounds, vocabulary, and grammatical patterns. STM can quickly become overloaded, particularly when the speech rate is high or the content is unfamiliar. This often results in the loss of previously heard words before they are semantically connected. Even learners with strong vocabulary knowledge may struggle to maintain comprehension. Improving listening comprehension thus depends on strengthening STM through targeted training, gradual exposure to authentic language input, and the development of processing efficiency.

Key words: short-term memory (STM), language learning, processing spoken language, language comprehension.

Аннотация:

При изучении любого языка кратковременная память (КП) играет ключевую роль в обработке устной речи. Язык — это сложная когнитивная система, глубоко встроенная в повседневную жизнь, однако наше понимание точной роли кратковременной памяти в языковом понимании остаётся ограниченным. КП временно хранит фонологическую, лексическую и синтаксическую информацию достаточно долго, чтобы обеспечить интерпретацию предложения в реальном времени. Однако её ограниченная ёмкость создаёт трудности при обработке незнакомых или быстро предъявляемых языковых последовательностей на втором языке.

Понимание второго языка в реальном времени требует значительных когнитивных усилий, поскольку слушатели должны удерживать и интегрировать незнакомые звуки, лексику и грамматические структуры. Кратковременная память быстро перегружается, особенно при высокой скорости речи или при незнакомом содержании. Это часто приводит к потере ранее услышанных слов до того, как они будут семантически связаны. Даже учащиеся с хорошим словарным запасом могут испытывать трудности в поддержании понимания. Таким образом, улучшение навыков аудирования зависит от укрепления кратковременной памяти с помощью целенаправленной тренировки, постепенного знакомства с аутентичной речью и развития эффективности языковой обработки.

Ключевые слова: кратковременная память (STM / КП), изучение языка, обработка устной речи, понимание языка.

Annotatsiya:

Har qanday tilni o'rganishda qisqa muddatli xotira (QMX, STM) og'zaki nutqni qayta ishlashda muhim rol o'ynaydi. Til kundalik hayotga chuqur singib ketgan murakkab kognitiv tizimdir, biroq tilni tushunishda qisqa muddatli xotiraning aniq roli hali to'liq o'rganilmagan. QMX fonologik, leksik va sintaktik ma'lumotlarni real vaqt rejimida gapni talqin qilish imkonini beradigan darajada vaqtincha saqlab turadi. Biroq uning cheklangan sig'imi ikkinchi tilda notanish yoki juda tez taqdim etilgan til birliklarini qayta ishlashda qiyinchiliklar tug'diradi.

Ikkinchi tilni real vaqt rejimida tushunish katta kognitiv yuklama talab qiladi, chunki tinglovchilar notanish tovushlar, so'z boyligi va grammatik tuzilmalarni ushlab turishi va birlashtirishi kerak bo'ladi. Ayniqsa nutq tezligi yuqori bo'lganda yoki mazmun notanish bo'lsa, qisqa muddatli xotira tezda haddan tashqari yuklanadi. Bu esa ko'pincha ilgari eshitilgan so'zlarning semantik jihatdan bog'lanishidan oldin yo'qolib ketishiga olib keladi. Hatto so'z boyligi kuchli bo'lgan o'rganuvchilar ham tushunishni saqlab qolishda qiynalishlari mumkin. Shuning uchun tinglab tushunishni yaxshilash qisqa muddatli xotirani maqsadli mashqlar orqali mustahkamlashga, autentik til materiallariga bosqichma-bosqich duch kelishga va qayta ishlash samaradorligini rivojlantirishga bog'liq.

Kalit so'zlar: qisqa muddatli xotira (STM / QMX), til o'rganish, og'zaki nutqni qayta ishlash, tilni tushunish.

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time sentence interpretation. However, its limited capacity presents challenges when processing unfamiliar or rapidly presented linguistic sequences in a second language.

Comprehending a second language in real time is cognitively demanding, as listeners must hold and integrate unfamiliar sounds, vocabulary, and grammatical patterns. STM can quickly become overloaded, particularly when the speech rate is high or the content is unfamiliar. This often results in the loss of previously heard words before they are semantically connected. Even learners with strong vocabulary knowledge may struggle to maintain comprehension. Improving listening comprehension thus depends on strengthening STM through targeted training, gradual exposure to authentic language input, and the development of processing efficiency.

This issue is not only cognitive but also cultural. McCarty from the University of California emphasizes that language loss disrupts memory, self-perception, and cultural identity. Language is an embodied system that reflects emotional, physical, and social realities. When silenced, entire practices and gestures tied to linguistic expression may vanish. Sheilah Nicholas illustrates this through the Mojave word 'kavanaam', a term embodying a gesture of tenderness. Its loss and subsequent rediscovery through lived experience reveal how language connects deeply with embodied knowledge. Kari A. B. Chew, a speaker of Chikashshanompa', shows how intergenerational language transmission revives cultural continuity. Initially doubtful, Chew came to view teaching and creating literature for younger learners as a means of ensuring linguistic survival. His experience highlights that language recovery is a shared act of resilience, education, and identity preservation. These perspectives collectively suggest that language is not only a tool of communication but also a repository of memory, care, and collective responsibility. To support learners, pedagogical approaches should incorporate not only memory training strategies

but also culturally embedded practices that reinforce both cognitive and emotional engagement with the target language.

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