

Abstract:

Previous studies have suggested that short-term and long-term memory processes independently affect performance in the sentence-imitation task. The multi-component working memory model by Baddeley and Hitch offers a suitable theoretical description of how these processes contribute to this performance.

In order to examine the influence of language knowledge located in the long-term memory on performance in the sentence-imitation task while statistically controlling for the influence of short-term memory, we assigned to our participants different tasks testing their language knowledge, phonological short-term memory (phonological loop), complex short-term memory (central executive) and the sentence-repetition task. Results from hierarchical linear regression yield significant contribution of the tasks testing language knowledge to explaining the variance in the sentence-imitation task, while controlling for the contributions from the phonological and complex short-term memory tasks.

These results are in accordance with previous research and the theory of multi-component working memory.

Keywords:

working memory, episodic buffer, sentence imitation