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# The role of working memory in second language reading comprehension

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## **Abstract**

This study examined the role of working memory capacity in the development of second language reading at beginning, intermediate and advanced levels. A total of 140 L1 Persian EFL learners at the beginning, intermediate and advanced levels participated in the study. They were all studying English as a foreign language in a private language school. All the participants completed an L1 reading span test based on Daneman & Carpenter's (1980), a math span test based on Robert and Gibson (2002) and Salthouse & Babcock (1991), and an English non-word recognition task adapted from Gathercole, Pickering, Hall, & Peaker (2001). The participants also completed measures of reading proficiency, including a cloze test, a short-answer comprehension test, and a reading recall (the texts were adjusted for different proficiency levels). Multiple regression analysis was applied to determine whether there was any significant relationship between working memory and reading at different levels of proficiency. The results of this study indicated a significant relationship between working memory capacity and L2 reading ability only among learners of lower proficiency, not for the intermediate and advanced levels. This suggests that working memory plays a diminishing role in discriminating performance on second language reading measures at higher levels of proficiency.

## **Dedication**

To Zahra and Reza, my wife and son, who supported me incredibly during my Ph.D  
programme

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## **List of Acronyms**

WM: Working Memory

WMC: Working Memory Capacity

PSTM: Phonological Short-Term Memory

L1: First Language

L2: Second Language

SLA: Second Language Acquisition

EFL: English as a Foreign Language