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The role of working memory in second language reading comprehension

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A thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Language Teaching and Learning, Department of Applied Language Studies and Linguistics, The University of Auckland, 2011
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
Acknowledgment

First and foremost, I would like to express my sincere gratitude to my supervisor, Dr Rebecca Adams, for her patience, guidance, and expertise on this project. Rebecca has always been supportive and provided me with her insightful comments and constructive suggestions throughout this project. I would like to express my special thanks to my co-supervisor, Dr Jenefer Philp, for her time and insightful suggestions. Jenefer has always been so kind, encouraging and her support throughout this project has been invaluable.

I would like to thank my participants who kindly consented to take part in this study and put a lot of time into completing several reading and memory tasks. I would also like to thank Mrs Karshenas, the head of the Nasle-Farda language school, who kindly consented to this study being conducted in her language school. I wish to thank Joanna Niederer for proofreading this thesis.

Finally, I would like to express my appreciation of my examiners, Professor Michael Harrington and Dr. Paula Winke, for their careful reading of the thesis and insightful comments.
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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