

ZMATH 2013c.00921**Nunes, Terezinha; Barros, Rossana; Evans, Deborah; Burman, Diana****A game-based working memory intervention for deaf children.**

De Wannemacker, Stefan (ed.) et al., Serious games: The challenge. ITEC/CIP and T 2011: 2nd international joint conference of the Interdisciplinary Research Group of Technology, Education, Communication, and the Scientific Network on Critical and Flexible Thinking, Ghent, Belgium, October 19–21, 2011. Revised selected papers. Berlin: Springer (ISBN 978-3-642-33813-7/pbk; 978-3-642-33814-4/ebook). Communications in Computer and Information Science 280, 31-39 (2012).

Summary: Working memory (WM) is the ability to keep information in mind and use this information to guide behavior in the absence of external cues. This ability is required in a variety of school tasks and is therefore an important cognitive skill for educational success. Children who have difficulties in learning mathematics in primary school have lower scores in WM tasks (see [*S. E. Gathercole* and *S. J. Pickering*, “Assessment of working memory in six- and seven- year-old children”, *J. Educ. Psychol.* 92, No. 2, 377–390 (2000); *S. J. Pickering* and *S. E. Gathercole*, Working memory test battery for children (WMTB-C) manual. London: The Psychological Corporation (2001); *M. C. Passolunghi* and *L.S. Siegel*, “Working memory and access to numerical information in children with disability in mathematics”, *J. Exp. Child Psychol.* 88, No. 4, 348–367 (2004); *P. Barrouillet* and *R. Lépine*, “Working memory and children’s use of retrieval to solve addition problems”, *J. Exp. Child Psychol.* 91, No. 3, 183–204 (2005)]). WM is a longitudinal predictor of children’s difficulties in learning mathematics ([*D. C. Geary*, *C. O. Hamson* and *M. K. Hoard*, “Numerical and arithmetical cognition: a longitudinal study of process and concept deficits in children with learning disability”, *J. Exp. Child Psychol.* 77, No. 3., 236–263 (2000); *L. S. Fuchs* et al., The prevention, identification, and cognitive determinants of mathematics difficulty. *J. Educ. Psychol.* 97, No. 3, 493–513 (2005)]) even after controlling for children’s general intelligence ([*T. Nunes* et al., “The contribution of logical reasoning to the learning of mathematics in primary school”, *Br. J. Dev. Psychol.* 25, No. 1, 147–166 (2007); *T. Nunes*, et al., *Br. J. Educ. Psychol.* 82, No. 1, 136-156 (2012; ME 2012e.00205)]).

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