

How are short-term memory skills related to excellent spelling? Comparing age-appropriate and excellent spellers

Milla Horváth¹, Claudia Laskay-Horváth^{1,2,3}, István Tafferner¹, Ferenc Kemény^{4,1}

¹Institute of Education and Psychology at Szombathely, Eötvös Loránd University, Budapest, Hungary

²Doctoral School of Psychology, Eötvös Loránd University, Budapest, Hungary

³Institute of Psychology, Eötvös Loránd University, Budapest, Hungary

⁴Department of Psychology, University of Graz, Graz, Austria

Introduction: Literacy development research is mostly focused on the development of reading, although spelling is also an important skill in everyday life. There is a growing body of literature concerning spelling development, which is dominated by studies with typically developing children and children with spelling or reading impairment. The current study focuses on how age-appropriate spellers and excellent spellers differ on their short-term memory (STM) abilities.

Method: We recruited 519 elementary school children in grade 1 through 6 (mean age = 10.02, SD = 1.80). Children were either age-appropriate (spelling performance within ± 0.5 SD) or excellent spellers (at least 1 SD above average in spelling performance). Each participant completed a spelling exercise and one of three STM tasks: a verbal, a visuospatial, or a phonological STM task.

Results: Excellent spellers outperformed age-appropriate spellers in Verbal STM even after controlling for age and word reading. However, no significant differences were observed in Visuospatial and Phonological STM.

Discussion: Our study draws attention to the importance of verbal STM in outstanding spelling skills. This is in line with current theories of the development of spelling skills.