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Lahnstein Scholarship 2009

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Recent publications:

Korinth, S. P., Sommer, W., & Breznitz, Z. (in press). Does silent reading speed in normal adult readers depend on early visual processes? Evidence from event-related brain potentials. Brain and Language, doi:10.1016/j.bandl.2011.08.003

Korinth, S. P., Sommer, W., & Breznitz, Z., (2011) Toward an ERP Driven Diagnostic Approach for Reading Impairments, Developmental Neuropsychology, 36(7), 944-948.

Silent Reading Speed: Individual Differences and Training:

Brain Activity, Behavior and Eye-Movement Measures

The aim of this thesis was to unveil at least some of the causes for individual differences in reading speed for young adult German readers using three different research methods (i.e., event related brain potentials (ERPs), behavioral, and eye-tracking data). In addition, we tested whether and how it is possible to improve reading speed by means of a computer training program.

In the first experiment it was examined how individual differences in silent reading speed were reflected in early visual ERPs. The amplitude of the N170 component to words and also to faces was found to correlate with reading speed. Hence, it was concluded that domain-general and reading-specific visual processing abilities affect reading speed capabilities.

The second experiment examined the impact of a training program, which sought to improve reading speed through the manipulation of text exposure time (i.e., text

erasures in reading direction). It was found that the Reading Acceleration Program (RAP, Breznitz & Nevat, 2006) can improve reading speed without sacrificing high comprehension levels. Although the cognitive changes related to these speed gains were unclear, RAP was found to be a promising tool for the improvement of reading speed.

The third experiment provided additional information about reading speed variance and the impact of RAP training by examining eye-movements in a sentence reading paradigm. Reading speed variance was found to depend on eye-movement parameters related to within-word processing (i.e., Refixations and Fixation Duration) rather than on between-word parameters (i.e., Skipping and Regressions). In addition, RAP training improved especially within-word parameters.

In conclusion, each of the three experiments contributed individually to our understanding of the reading process and provided valuable information for the improvement of reading instruction, diagnostic, and intervention.