

Lea Wiehe, Germany
Scientific staff member, Humboldt-Universität zu Berlin
wiehelek@hu-berlin.de

Are reading tasks relevant? Comparing eye movements of children with and without reading disorder in silent and oral reading

Co-author 1: Katharina Weiland, Scientific staff member, Humboldt-Universität zu Berlin, weilandk@hu-berlin.de

Co-author 2: Julia Hartung, Scientific assistant, Humboldt-Universität zu Berlin, julia.hartung@hu-berlin.de

Co-author 3: Michael Arnold Wahl, Professor, Humboldt-Universität zu Berlin, michael.arnold-wahl@hu-berlin.de

Despite the increased use of eye tracking in psycholinguistic reading research, studies about the contribution of silent and oral reading (SOR) on eye movements, with respect to the reading abilities, are missing so far. We present the results of a comparative eye movement study on the effects of SOR in subjects with reading disorder (RD, N=9) and typical reading development (TD, N=44), with two matched texts. For statistical data analysis, we used dependent t-test because of its robustness against violations of normal distribution, and pooled it with Cohen's d as effect size. The results show significant differences between SOR for TD in most parameters, but, in contrast to that, RD only showed differences in singular eye movement patterns in terms of reading duration and progressive and regressive inter-word saccade count ($p < .05$, $d > .08$). Other parameters showed no differences in eye movements in both tasks ($p > .05$, $d > .02$). The results indicate that TD pupils are able to adapt their reading strategy due to the task, but RD are not. Therefore reading treatment should use oral reading to receive more information about the reading process and to enable pupils to improve their skills through auditory feedback.