Reading comprehension, executive functions and vocabulary in Danish adult L1 speakers

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Background and aims: Executive Functions (EF), especially working memory (WM), are related to reading comprehension (Kim, 2020; Butterfuss & Kendeou, 2018) and eye movements during reading (Traxler et al., 2015). It is, however, unclear whether these relationships depend on the specific language and its linguistic characteristics. In this study we investigate reading comprehension and cognition in Danish-speaking adults. Danish is characterized by deep orthography (Seymour et al., 2003) and tendency for reduction of word boundaries (Basbøll, 2005) and hence may place higher demands on EF for language use generally and for reading comprehension in particular.

Method: We investigated a sample of monolingual Danish-speaking young adults for their reading comprehension skills, multiple EF abilities (verbal and non-verbal WM, inhibition, shifting) and vocabulary to investigate the relation between cognitive abilities and reading comprehension related to different eye tracking measures. The design, procedure and stimuli align with what has been developed in the MultiplEYE COST Action CA21131 (see Müller et al., 2024).

Results: As we are currently in the process of collecting data, preliminary results will be presented at the MultiplEYE Final Conference. Results from reading comprehension by young Danish-speaking children suggest that cognitive flexibility predicts their sentence reading comprehension (see Knudsen et al., 2018), and therefore we expect to see significant associations between cognitive abilities and reading comprehension of Danish adults. Specifically, for participants with lower scores on executive function measures, we expect longer dwell times and larger number of regressions especially for complex words.

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