Reading Goals in Eye-Tracking Research: A Comparative Analysis of Purpose-Driven Processing in L1 and L2 Readers

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This study explores how reading purpose influences cognitive processing during reading, with a specific focus on eye movement patterns in first (L1) and second language (L2) contexts. It also investigates possible interactions between working memory capacity (WMC) and reading purpose. Drawing on experimental data from 75 university students (L1 English and L1 Turkish-L2 English speakers), the study examines how different reading goals (reading for information vs. reading for study) influence eye movement patterns and comprehension outcomes. Eye-tracking measures, including fixation behavior, regressions, and rereading patterns, were analyzed alongside comprehension performance. Comprehension was assessed through recall and recognition measures, while WMC was measured using a standardized reading span task. Results indicate that reading purpose plays a critical role in comprehension strategies, particularly in L2 readers, who demonstrated enhanced recall performance under study-oriented conditions. Eye movement data suggest increased engagement in rereading and regression behavior during purposeful reading, reflecting deeper processing. Notably, L2 readers showed greater adaptability to task demands compared to L1 readers. While eye movement measures showed limited sensitivity to WMC differences, comprehension outcomes revealed important cognitive interactions. Reading purpose enhanced recall performance, particularly among L2 readers with lower working memory capacity, suggesting a compensatory role of goal-directed processing. These findings underscore the role of cognitive resources in reading and suggest that task demands can differentially support readers depending on their working memory profiles. The findings highlight the importance of goal-directed reading strategies in L2 contexts and suggest pedagogical implications for designing reading tasks that support deeper comprehension and retention.