

Reading skill affects reading saccades well into late childhood

Anastasia Stoops

University of Illinois at Urbana-Champaign, Urbana-Champaign, Illinois, United States

Jessica Montag

University of Illinois, Champaign-Urbana, Champaign, Illinois, United States

Abstract

Skilled readers show faster and longer saccades as they move efficiently through text. While studies of adolescents are quite sparse, teens are assumed to have adult-like behavior with rapid developmental trajectory of the oculomotor parameters (Blythe, 2014; Rayner, 1998; 2009). Age and reading skill effects on saccadic behavior were examined in young adults and adolescents reading naturalistic multi-line texts. Eye movements were recorded from 113 college students and 52 adolescents, who read publicly available English language PROVO corpus. Participants' reading expertise was measured by vocabulary and reading comprehension tests. Linear mixed-effects regression models revealed that age interacted with reading expertise in how fast readers move through text (forward, regressive and return sweep saccades velocity). Age and vocabulary affected only teens. Individual differences emerged in a more heterogeneous population that is earlier on the developmental trajectory. The study found tighter than previously assumed coupling between oculomotor saccadic parameters and reading expertise.