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Hunter Hill  
*Brigham Young University*

Steven G. Luke, PhD  
*Brigham Young University*

Jennifer M. Brown  
*Brigham Young University*

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Eye Movements in Second Language Reading of Russian

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Hunter Hill, Steven G. Luke, PhD and Jennifer M. Brown PhD, German and Russian

Introduction

When we read, our eye movements are influenced by our knowledge of the language we are reading. When reading in a second language in which we have less experience, it is likely that our under-developed language skills will have less influence over our eye movements. While eye movements in reading have been studied extensively, this research has been restricted almost exclusively to native speakers of the language being read. The purpose of this study is to investigate second language reading, describing differences between native and non-native reading and identifying those learned eye-movement behaviors that transfer from one language to another and those that are contingent on expertise in the language being read.

Methodology

Participants read 40 Russian texts that differed in language difficulty, as well as 10 English texts. While they read, their eye movements were tracked using the Eyelink 1000 plus eye-tracking machine. After each text, participants answered a comprehension question. During our tests, we measured such variables as fixation duration, saccade amplitude (how far the eyes move), initial fixation location, refixation probability (how often a word is looked at more than once before moving on to another word), and other variables that allowed us to compare the subjects eye movements when reading in both English and Russian. In summary, we tried to answer the following questions: What happens in your second language as you become more proficient? In what ways does efficient reading contribute to increased proficiency in a language? What changes in the reading process when language proficiency improves?

Results

L2 reading is less efficient, but why? In the study, beginning and advanced learners of Russian read both English and Russian passages while their eyes were tracked. Mu increased equivalently for beginning and advanced learners when reading in the L2 (Russian). Tau also increased for all learners when reading in the L2, but this change was larger for beginning learners. Results indicate that all L2 readers experience difficulty at an early, orthographic level, while more advanced learners have reduced difficulty with semantic processing. In short, the data show that reading in a second language is harder for everyone, probably because they’re less practiced at recognizing the word and letter shapes, but that there’s an additional impairment for beginners at a later level – constructing the meanings of words and sentences.

Discussion

As people gain experience in a second language, some aspects of the reading process become more efficient, but others do not. Future work should investigate how classroom teachers can help students develop their reading skills holistically.
Conclusion

Everyone has trouble recognizing letters and visualizing Russian, because they do not have as much practice doing so. It did not matter if you were more proficient, all levels read slower in Russian than in English. Both groups also experienced later difficulty in reading in terms of understanding the meaning of words. This was more difficult for beginners. Meaningfully, it got easier to read in Russian as one gained experience in the language.

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