

Abstract

The effective visual field in Chinese reading was studied by using the self-paced moving-window technique developed in the Cognitive Psychology Laboratory of CUHK. Under this paradigm, subjects moved an optical mouse horizontally from left to right to see each successive Chinese character in a sentence printed in a spatially appropriate location on the computer screen. The availability of meaningful information on the right and left side of a fixated character (i.e. window size) was manipulated in order to find out the effective visual field for various reading tasks in Chinese. In Experiment 1 which required subjects to match a Chinese character, given at the beginning of a trial, in a sentence, subjects' reaction times were decreased when an additional character to the right of a fixated character was displayed. No significant change was obtained when further characters to the right or left side of the fixated character were visible. In Experiment 2 which required subjects to locate a Chinese character with reference to its semantic category, a similar effective visual field was found, i.e. one character to the right of a fixated character. In Experiment 3 which required subjects to comprehend a whole sentence, a larger effective visual field was evidenced and found to be two characters to the right of a fixated character. Overall, the results indicate that information beyond a fixated character is acquired and used in Chinese reading. The effective visual field tends to be skewed to the direction of reading and varies for different reading tasks.