Effects of Computer-Mediated Dictionaries on Reading Comprehension and Vocabulary Acquisition

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Abstract : This study aimed to investigate the effects of paper-based monolingual, pop-up and type-in electronic dictionaries on improving reading comprehension and incidental vocabulary acquisition and retention in an EFL context. It tapped into how computer-mediated dictionaries may have facilitated/impeded reading comprehension and vocabulary acquisition. Findings showed differential effects produced by the three treatments compared with the control group. Specifically, it revealed that the pop-up dictionary condition had the shortest average vocabulary searching time, vocabulary and text reading time, yet with less than the type-in dictionary group but more than the book dictionary group in terms of frequent dictionary 'look-ups' ($p<.0001$). In addition, ANOVA analyses also showed that text reading time differed significantly across all four treatments, and so did reading comprehension. Vocabulary acquisition was reported as enhanced in the three treatments rather than in the control group, but still with insignificant differences across the three treatments, yet with more differential effects in favour of the pop-up condition. Data also assert that participants preferred the pop-up e-dictionary more than the type-in and paper-based groups. Explanations of the findings vis-à-vis the cognitive load theory were presented. Pedagogical implications and suggestions for further research were forwarded at the end.