

Montgomery, D. J. (1996). *The effectiveness of word processor spell checker programs to produce appropriate, online word choices for misspellings of students with learning disabilities*. Unpublished doctoral dissertation, Purdue University, West Lafayette. George R. Karlan (Advisor): 141 pages of text, 68 references, 13 appendices, 21 tables, and 4 figures.

This study investigated whether spell checker programs differ in the ability to produce appropriate, online word choices for (a) misspellings generated by students with learning disabilities, (b) misspellings generated by students with learning disabilities with respect to phonetic error level, and (c) misspellings generated by students with learning disabilities with respect to bigram ratio. Nine hundred seventy-four misspellings taken from 111 writing samples from students with learning disabilities were spell checked by nine word processing spell checkers. In addition, each misspelling was classified according to phonetic error level and bigram ratio. Three significant differences were found. First, a significant difference was found among spell checkers' ability to produce appropriate online word choices. Spell checkers were able to identify the target word for 53% of all misspellings. Second, a significant difference was also found among spell checkers' ability to produce appropriate, online word choices with respect to phonetic error level. Efficiency of spell checkers increased as the phonetic error level of the misspellings increased. Finally, a significant difference was found among spell checkers' ability to produce appropriate, online word choices with respect to bigram ratio. Efficiency of spell checkers increased as the bigram ratio increased. Significant differences were found between programs and within programs for both phonetic error level and bigram ratio. These results suggest that spell checkers are ineffective in producing appropriate, online word choices for misspellings generated by students with learning disabilities.