Digital divide in quantitative methods: The effects of computer‐assisted instruction and students' attitudes on knowledge acquisition

Kamila Kolpashnikova

Silvia Bartolic

https://onlinelibrary.wiley.com/doi/10.1111/jcal.12322

Abstract

Computer-assisted instruction can change the way introductory statistics and quantitative methods courses are taught. Using a two-group pretest–posttest design, we conducted an experiment using an undergraduate social science student sample to investigate whether the introduction of statistical software to teaching quantitative methods would improve knowledge acquisition and attitudes toward quantitative methods courses. Our project confirmed that implementing computer-assisted instructional methods increased knowledge acquisition in quantitative methods courses compared with students' academic performance in other courses, measured by grade point average. We also found that student attitudes have weak and mostly nonsignificant influence on quantitative methods knowledge tests. Additionally, the paper suggests a curriculum-level approach to teaching quantitative methods to undergraduate students.