

Research Considerations: Familiarity with Technology
Article 2

National Board on Education Testing Public Policy,), Russell, Michael, (1997), Boston College
Massachusetts, *Testing Writing on Computers: An Experiment Comparing Student Performance on
Tests Conducted via Computer and via Paper-and-Pencil*, Volume 5 Number 3, Available:
<http://epaa.asu.edu/>

Computer use has grown rapidly during the past decade. Within the educational community, interest in authentic assessment has also increased. To enhance the authenticity of tests of writing, as well as of other knowledge and skills, some assessments require students to respond in written form via paper-and-pencil. However, as increasing numbers of students grow accustomed to writing on computers, these assessments may yield underestimates of students' writing abilities. This article presents the findings of a small study examining the effect that mode of administration -- computer versus paper-and-pencil -- has on middle school students' performance on multiple-choice and written test questions. Findings show that, though multiple-choice test results do not differ much by mode of administration, for students accustomed to writing on computer, responses written on computer are substantially higher than those written by hand (effect size of 0.9 and relative success rates of 67% versus 30%). Implications are discussed in terms of both future research and test validity.