

Research Considerations: Paper and Pencil Vs Online Article 7

Pommerich, M. (2004). Developing computerized versions of paper-and-pencil tests: Mode effects for passage- based tests. *Journal of Technology, Learning, and Assessment*,2(6).Available from <http://www.jtla.org>

As testing moves from paper-and-pencil administration toward computerized administration, how to present tests on a computer screen becomes an important concern. Of particular concern are tests that contain necessary information that cannot be displayed on screen all at once for an item. Ideally, the method of presentation should not interfere with examinee performance on the test. Examinees should perform similarly on an item regardless of the mode of administration. This paper discusses the development of a computer interface for passage-based, multiple-choice tests. Findings are presented from two studies that compared performance across computer and paper administrations of several fixed-form tests. The effect of computer interface changes made between the two studies is discussed. The results of both studies showed some performance differences across modes. Evaluations of individual items suggested a variety of factors that could have contributed to mode effects. Although the observed mode effects were in general small, overall the findings suggest that it would be beneficial to develop an understanding of factors that can influence examinee behavior and to design a computer interface accordingly, to ensure that examinees are responding to test content rather than features inherent in presenting the test on computer.