

Design Considerations

Article 7

U.S. Department of Education, National Center for Education Statistics. *NAEP Validity Studies: Implications of Electronic Technology for the NAEP Assessment.* NCES 2003–16, by Richard P. Durán. Project Officer: Patricia Dabbs. Washington, DC: 2003

The purpose of this paper is to review major options NAEP faces regarding the introduction of technology into the assessment and to review priorities that can guide this process. The National Assessment of Educational Progress (NAEP) operates in a changing assessment world. Its credibility and utility as an assessment system requires that NAEP maintain the stability of its assessments so that they capture change in students' learning across years. In addition, in its role as a model for the state of the art in the assessment of educational achievement, NAEP must embrace new forms of assessment that are consistent with changing educational needs of students. Electronic technologies have relevance to both goals. The rapid spread and infusion of technologies such as computers, digital media, the Internet, video and audio recorders, and playback devices into every phase of contemporary life is affecting both the methods of learning and assessment and the content of what needs to be learned in schools. However, embracing new technologies does not mean NAEP should rush to use every new technology in operational assessments. On the contrary, in its position of leadership, NAEP must thoroughly evaluate new technologies to address both validity and cost issues and introduce them to operational NAEP only when these issues have been addressed. Thorough evaluation studies are, themselves, costly in time and money, so it is important to identify and concentrate on technological innovations in NAEP assessments that build coherently on NAEP's existing mission and on the planning process for the future of the NAEP. These concerns have been acknowledged in deliberations on the redesign of NAEP commissioned by the National Assessment Governing Board (NAGB). The focus needs to be on how computer-administered NAEP assessments and electronic technology can help better assess what students know and are capable of doing, and better help inform the public on students' educational achievement. It is important that NAEP proceed in a timely manner to evaluate and recommend priorities on major electronic technology innovations in the near, intermediate, and far-term future. As part of this process, it will be important to identify ways in which technological developments are having impact on the design and implementation of assessment systems, and on the facilitation of classroom learning and instruction.

Technological innovations for NAEP currently being considered fall into three broad categories: Implications of Electronic Technology for the NAEP Assessment: 1) Computer-based presentation of items and recording of responses on assessments of existing NAEP constructs. 2) Extension of NAEP to assessment of new constructs, using technology. 3) Computer enhancement of assessment processes other than presenting items to students and recording their responses. These categories lead to different requirements for research on the impact of innovations on NAEP validity. Early identification of the highest priority innovations is important, so that validity research can be carried out prior to their introduction into NAEP operations.