Test Scores—Are They a Distorted Proxy for Achievement?

Do not read too much into achievement test scores when evaluating school programs. That is the main message of a new report from the Congressional Budget Office (CBO). Critics of U.S. schools and education reformers might also wish to consider the report's caution about accepting common explanations for educational trends.

"Educational Achievement: Explanations and Implications of Recent Trends," is offered as an assessment of recent developments in U.S. education, but amounts essentially to a critique of how standardized achievement tests are used and misused in policy discussions.

Test scores, widely employed for measuring individual student progress, are increasingly relied on in evaluating the effectiveness of educational policy. The report notes that the decline in test scores in the 1960s and 1970s was a major focus of reports on the status of education in the early 1980s and helped to generate the current school reform movement.

The report's general prescription for assessing educational achievement is to look behind the test data. For example, contrary to the widespread impression that the slide in student test scores ended about 1980, data show that the scores of younger children actually turned upward in the middle 1970s. The confusion was caused by the averaging of scores of all children in school and the particular attention given the performance of high school students. Understanding this lag or "cohort pattern" is obviously important in establishing cause and effect.

A major conclusion of the report is that simple trends in test scores cannot be relied on as indicators of whether reform initiatives are effective. According to the report, such data "will in many instances overestimate the effectiveness of educational policy initiatives because the current rise in scores antedates many of these policies and might well have continued in their absence, at least in the higher grades. In addition, the current emphasis on testing is likely to increase the extent to which teachers 'teach to the test'—making such scores "a distorted proxy for achievement."

Some reservations are expressed about the quality of the standardized tests themselves, but the major point made on the subject is to advise against drawing conclusions from the results of any single test. Different tests measure different knowledge and skills and cross-checking results from several tests can provide a fuller picture. The report specifically warns against using a single national achievement test such as the National Assessment of Educational Progress as a basis for national educational policy.

The CBO report discounts efforts to single out a dominant cause of educational trends and says the evidence points to a combination of educational and noneducational factors. However, two phenomena in the noneducational category do seem to have made a significant difference. The effects of changing ethnic composition of the schools and increasing family size can be fairly well documented and "each account for at most a fifth to a fourth of the total change in scores during portions of the achievement decline." Incidentally, the data do not indict either television viewing or the increasing number of children living in single-parent households, often cited by critics as proximate causes of the decline in scores.

CBO undertook the study in response to a request from the Senate Labor and Human Resources Committee's education subcommittee. It was prepared by Daniel Koretz of CBO, holder of a doctorate in child development.

The report does not draw any sweeping conclusions on whether or not U.S. education is improving under the reforms. It does make specific suggestions on a few points. For example, it notes recent gains in the test scores of black and Hispanic students relative to nonminority students, but says that the causes for this improvement remain largely unexplained. Observing that commonly cited causal factors, desegregation and federal compensatory education programs, "can account for only a moderate share of the improvement," it warns that policies to emphasize more general efforts to improve education could threaten the gains.

The report also remarks that the so-called return to basics in the schools may have been overdone. Students now seem to be weak in "higher order skills"—such as problem-solving in mathematics. The place to rectify this is in the lower grades.

In a period when books like *The Closing of the American Mind*, by Allan Bloom, and *Cultural Literacy*, by E. D. Hirsch, Jr., have shifted the discussion of American education to broader realms of social criticism, the CBO report is more concerned with methodology than with drawing morals. But it does hammer home the point that test scores are not synonomous with achievement.

■ JOHN WALSH

Briefing:

Choppin Is New Head of Howard Hughes

Purnell W. Choppin, chief scientific officer of the Howard Hughes Medical Institute, has been elected president by the HHMI trustees. Choppin 58, succeeds Donald S. Fredrickson, who resigned amid allegations that his wife mishandled Hughes funds (*Science*, 12 June, p. 1417).

Choppin is a virologist with special expertise in basic viral structure and the mechanisms by which certain viruses—particularly influenza and measles—produce cell injury and disease. He came to Hughes from Rockefeller University about 2 years ago to be HHMI's first vice president for research. He is a graduate of Louisiana State University School of Medicine. ■ **B.J.C.**

Textbook Rulings Reversed

Fundamentalists suffered two setbacks in late August when federal appeals courts struck down judges' decisions in school textbook cases in Tennessee and Alabama (*Science*, 2 January, p. 19).

An appeals court in Cincinnati ruled on 24 August that, contrary to the ruling by a Hawkins County, Tennessee, judge, the constitutional rights of fundamentalist Christian children were not being violated by the use of textbooks that offended their religious beliefs. The court also reversed the judge's order that public schools pay private tuition so the children could have alternate schooling. It pointed out that "the students are not required to affirm or deny a belief" or to engage in practices incompatible with their religion.

On 26 August, an appeals court in Atlanta reversed an Alabama court judge's order that 44 textbooks be banned from state public schools on the grounds they promoted "secular humanism." The court said Alabama judge Brevard Hand's order had wrongly construed the First Amendment as containing "an affirmative obligation to speak about religion."

The court did not deal with the question of whether secular humanism is a religion, but said that even if it is, the plaintiffs had not demonstrated that the state was promoting it. It said there was nothing to indicate that "omission of certain facts regarding religion from these textbooks of itself constituted an advancement of secular humanism or an active hostility towards theistic religion. . . . " ■ **C.H.**