

Testing Service to Use New Method to Find Biased Questions

By SCOTT JASCHIK

ALBANY, N.Y.

The Educational Testing Service will employ a new method this fall to find questions on its standardized tests that may discriminate against members of minority groups.

The method will first be used on the National Teachers Examination in October and may be expanded to other tests soon after.

E.T.S. officials discussed the new method in an interview here, following a hearing by the New York Legislature's higher-education committees on proposed legislation

Continued on Page 13, Column 1

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Critics and Defenders of Standardized Tests Weigh 'Truth-in-Testing' Bills in New York

ALBANY, N.Y.

Using complicated statistics and personal anecdotes, critics and defenders of the standardized-testing industry last week debated six bills under consideration by the New York Legislature to extend that state's landmark "truth-in-testing" law.

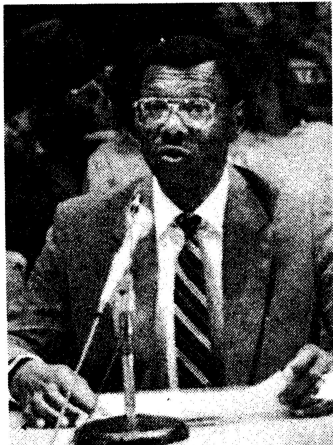
Although the 1979 law applied only to New York, it changed testing practices nationwide, as would any of the new bills if they become law.

"We know, and the testing companies know, that New York's interest makes it possible for a nationwide trend," said Kenneth P. LaValle, chairman of the Senate Higher Education Committee and sponsor of the legislation.

The 1979 law requires admissions-testing companies to give students their corrected answer sheets and a copy of their examinations. The new legislation would:

- Extend "truth-in-testing" provisions to all professional licensing tests and the Test of Standard Written English.

- Apply the "Golden Rule" agreement to the preparation of professional and occupational standardized tests. The agreement estab-



William Harris: "E.T.S. is committed to take all feasible steps to prevent bias."

lished a process for discarding questions that may be biased against minorities.

- Require testing companies to keep all challenges to test questions, and responses to those challenges, on file for public inspection. Names would be deleted from the challenges.

- Allow all students to request

their test questions and answers when they register for a test.

- Require test developers to report annually to the state on scoring patterns of minority and non-minority and male and female test-takers. The information would be studied by a new advisory commission.

Supporters said the legislation would curb abuses by the testing companies and uncover biased questions that lower the scores of minority students.

Testing-company officials countered that many of the provisions would not determine bias, but would instead make the tests less accurate and more expensive. The officials said they were already committed to finding and eliminating any biased questions.

Senator LaValle said chances were good for passage of at least some of the bills this session, adding that he expected support from Gov. Mario M. Cuomo, a Democrat.

Many observers here said the bills' supporters should benefit from the broad, and unusual, legislative coalition working for passage.

Mr. LaValle is a moderate Republican and has gained support for the

Continued on Following Page

Testing Service to Employ New Method in Fall to Find Questions on Standardized Tests that May Show Bias

Continued from Page 1

to expand the state's regulation of standardized tests.

Although the officials said the new method was only part of a continuing effort to improve their tests and unrelated to the legislation, critics of the testing organization said it would be inadequate and was intended only to undercut support for the New York bills.

Michael J. Zieky, a senior examiner at E.T.S., said the new method would allow test developers to be more certain that differences in scoring rates among different groups were due to problems in the questions.

Quality of Education Blamed

E.T.S. officials have long said that the average scores of minority students are lower than those of white students because of the quality of education the minority students have received.

The new E.T.S. procedure will use a technique called the Mantel-Haenszel method, developed in 1959 by two

cancer researchers, Nathan Mantel and William Haenszel, who wanted to demonstrate that higher death rates among smokers were caused by smoking, not by age. To isolate the smokers in their study, the researchers compared the odds of dying of cancer among smokers and non-smokers of the same age.

Mr. Zieky said E.T.S. would use the method to compare the answer rates on certain questions of groups of students who received the same overall score on examinations.

The methods will help E.T.S. to "flag questions that need to be looked at," Mr. Zieky said. Unlike some methods for examining questions proposed by testing critics, the process would not automatically bar certain questions from future use, he added.

"I would never want to see any statistic take the place of human judgment," he said.

The process could be applied to all of the service's standardized examinations, Mr. Zieky said, but the number of minority students taking some

examinations might not be large enough to yield statistically valid information, he said.

E.T.S. officials have not decided how soon they will be able to expand the new test analysis program or whether its results will be released to the public, Mr. Zieky said.

Regardless of the new method, critics of E.T.S. said they would continue to push for more regulation of the testing industry.

'Makes Them Look Better'

Kenneth P. LaValle, chairman of the New York Senate Higher Education Committee, said E.T.S., when faced with pending legislation affecting its activities, frequently announced new testing practices. "It makes them look better in the eyes of the public," he said.

Mr. LaValle said that even if E.T.S. officials convinced him that they were acting responsibly, he would push for passage of the six bills he has introduced. "I sleep better when something's in legislation," he said.

John G. Weiss, executive director

How Test-Makers Would Decide Whether to Omit Questions from Future Exams

Legislators, public-interest groups, and testing organizations are debating two new methods for eliminating bias in standardized tests.

One, the "Golden Rule" agreement, is based on an out-of-court settlement that ended a lawsuit by the Golden Rule Insurance Company against the Educational Testing Service.

The agreement covered only the Illinois versions of an insurance examination administered by E.T.S., but the testing service has voluntarily expanded it to cover all versions of that examination. Many critics would like to see the agreement expanded by legislation to cover more tests.

E.T.S. developed the second meth-

od, based on a statistical technique called the Mantel-Haenszel method. E.T.S. officials say their technique is far more reliable for finding biased questions. They plan to start using it with October's National Teachers Examination.

Here is how test-makers would use the two methods to determine whether a particular question should be used on future versions of the test:

Golden Rule Agreement

Step 1: If at least 40 per cent of the total population answer the question correctly and the correct-answer rates of black and white people differ by no more than 15 percentage points, place the question in one category.

If both of those conditions are not met, place the question in a second category.

Step 2: In developing new tests, use only items from the first category as long as there are enough questions to create the new test without altering its subject matter or difficulty.

Mantel-Haenszel Method

Step 1: Classify all people who took the test into divisions based on their score on the entire test.

Step 2: Within each division, determine the odds of members of any two groups—such as women and men—answering the question correctly. For example, if the question is answered correctly by 16 out of 20 women and 12 out of 18 men with the

2 Questions that Critics Call Unfair; 2 that ETS Says Rule Would Exclude

Following are two questions that testing critics cite as evidence of unfairness in current tests—the first because students from poor backgrounds would be unfamiliar with a word in the answer; the second because of its implications about poor parents:

1. Find the closest analogy to "runner is to marathon."

- a. envoy is to embassy
- b. martyr is to massacre
- c. oarsman is to regatta
- d. referee is to tournament
- e. horse is to stable

—from the Scholastic Aptitude Test

2. All good parents care about the education of their children, and all parents who care about the education of their children buy them encyclopedias; therefore, all parents who do not buy their children encyclopedias are not good parents.

If the argument above is valid, then it must be true that:

- a. No bad parents buy encyclopedias.
- b. No bad parents care about the education of their children.
- c. Some good parents do not buy encyclopedias.
- d. All good parents buy encyclopedias.
- e. All encyclopedias are bought by good parents.

—from the Law School Admission Test

Questions 3 and 4, below, according to Educational Testing Service officials, would be excluded from future tests if the "Golden Rule" agreement were applied to all tests. The agreement would exclude these questions because the correct-answer rates of Hispanic and black test-takers were more than 15 percentage points below those of white test-takers.

3. Complete the following computation:

$$\frac{1}{10} + \frac{1}{1000} =$$

- a. 1.1
- b. 1.01
- c. 0.101
- d. 0.011
- e. 0.11

—from the Pre-Professional Skills Test

4. Complete the following computation:

$$1 - \left(\frac{x}{x+1} \right) - \frac{1-x}{x+1} =$$

- a. 0
- b. 1
- c. $\frac{1}{x+1}$
- d. $\frac{x}{x+1}$
- e. $\frac{-2x}{x+1}$

—from the Graduate Record Examination

Answers: 1. c; 2. d; 3. c; 4. d

of the National Center for Fair and Open Testing, said, "E.T.S. is obviously reacting to legislative pressure. There's no question but that they see that the tide is turning."

Mr. Weiss said the Mantel-Haenszel method would not necessarily reveal biased questions because it assumes that the whole tests are not biased.

Mr. Zieky acknowledged that the method was based on that assumption, but said, "All of the evidence shows that the tests as a whole are not biased."

Said Mr. Weiss: "The entire tests use the vocabulary of upper-middle class, suburban culture. They are clearly biased against certain other groups."

E.T.S. was also motivated to start using the Mantel-Haenszel method, Mr. Weiss said, because the American Association of Colleges for Teacher Education has been considering endorsing use of the "Golden Rule" agreement for eliminating bias on the National Teachers Examination. Many states require certain scores on the N.T.E. to enter or graduate from teacher-education programs, or to be certified as a teacher.

The 1984 agreement between E.T.S. and the Golden Rule Insurance Company was an out-of-court settlement of a lawsuit filed by the company against E.T.S., charging that an insurance test developed by the testing service for the State of Illinois discriminated against black people. The agreement set up a procedure for discarding questions for which the difference in correct-answer rates of black and white test-takers was greater than 15 percentage points.

Donna M. Gollnick, director of professional development for the A.A.C.T.E., said the association's Board of Directors had considered endorsing the use of the Golden Rule agreement at its February meeting, but postponed action at the request of E.T.S. officials.

Most board members "are leaning" toward endorsing the plan at their July meeting, Ms. Gollnick said.

Mr. Zieky said it was "just wrong" to say that recent developments had prompted the testing service's work on the Mantel-Haenszel statistic. "It's a natural outgrowth of what we've been doing for 20 years," he said.

New Testing Bills Debated by Critics and Defenders

Continued from Preceding Page
measures from many members of his party.

The sponsor in the lower house is Deputy Speaker of the Assembly Arthur O. Eve, a liberal Democrat. The Black and Puerto Rican Legislative Caucus and the National Education Association of New York have also strongly endorsed the bills.

Supporters of the legislation emphasized that they did not oppose all standardized testing.

"What we're trying to do is make the tests as fair as possible for all individuals," Mr. LaValle said. "When we talk about these tests, we're talking about people's futures."

Assemblyman Roger L. Green, chairman of the Black and Puerto Rican Legislative Caucus, said minority-group politicians had grown more concerned about standardized tests as they watched the decline of black enrollment in professional schools.

"There's no question but that those tests are biased and they have something to do with it," he said.

He added, however, that the testing legislation "should not be looked at as a parochial, minority issue." Making the tests fairer and easing the process for challenging questions "really helps everyone," he said.

Several speakers in favor of the legislation pointed to recent questions on standardized tests that they said were biased against minorities.

'How Many Regattas in Harlem?'

Charles Stone, professor of English at the University of Delaware and former director of minority affairs at E.T.S., cited an analogy question that required students to know the word "regatta." "How many regattas are there in Harlem or the south side of Chicago?" he asked.

"No single process has more perpetuated racial segregation in this country than standardized testing," Mr. Stone said, adding that the proposed legislation would "help E.T.S. enter the democratic 20th century."

Jerry Lee, Deputy Speaker Eve's special assistant, who testified on behalf of the National Conference of Black Lawyers, said the racial implications of a test question had once led him to walk out of the examination. "Minority test-takers must display a significant level of cultural self-denial, alien-value assumption, and acquiescence in racial degradation in order to obtain an acceptable

grade on most standardized tests," he said.

Testing-company officials strongly defended their efforts to insure the fairness of the tests.

"E.T.S. is committed to take all feasible steps to prevent bias in the construction of its tests," said William Harris, director of the E.T.S. Northern Regional Office. "Unfortunately, the bills before you contain provisions based on the assumption that a difference between groups in performance on a test question automatically means that the question is biased."

"Such an assumption is false educationally and psychometrically. If it were true, math questions would be considered biased because Asian students score higher than white students."

"We urge you not to legislate procedures that will tie our hands and those of other testing companies that are advancing the theory and practice for new ways to make tests as fair as possible," he said.

'Misleading and Harmful'

Frederick H. Dietrich, vice-president for programs of the College Board, which sponsors the Scholastic Aptitude Test and many other standardized tests, said his organization was most concerned about the bill that calls for the compilation and analysis of the scores of students from minority groups.

"Since performance among racial or ethnic groups may reflect educational disadvantages, any attempt to remedy those disadvantages by manipulating the tests, rather than addressing the substantive issues of finding ways to enhance educational preparation of all students, would be both misleading and harmful to the very students whose interests we believe the sponsors of this bill have at heart," he said.

Jacqueline E. Woods, director of the Washington office of the American College Testing Program, said legislation including licensing tests under the provisions of the "truth-in-testing" laws would lead to major increases in the costs of those tests.

As the hearing dragged on for more than four hours, legislative patience waned. John J. Fremer, vice-president of the measurement division of the Psychological Corporation of Harcourt Brace Jovanovich, told the legislators that requiring challenges to be public "would help those seeking to harass testing companies."

Senator LaValle cut him off. "We're sorry you feel we're harassing you," Mr. LaValle said. "Think how students feel when they're dealing with test companies."

—SCOTT JASCHIK

Education Policies Are Major Issue in Fall Elections

Continued from Page 11

tion—the filing deadline is June 3—Democratic Gov. James J. Blanchard is almost certain to emphasize his record of support for higher education when he begins his campaign.

He will remind voters that he has increased appropriations to state universities by 40 per cent, has frozen tuition at public institutions, and has doubled the number of needy college students receiving state financial aid.

Governor Blanchard is expected to make the state's economic recovery the centerpiece of his campaign, and to argue that higher education is an important factor in continued economic development.

So far, no Democrats have come forth to challenge Mr. Blanchard. However, five Republicans have filed as gubernatorial candidates, including Wayne County Executive William Lucas, a black conservative who gained widespread national attention when he converted to the G.O.P. last year.

New Mexico. Higher education has already become a topic of debate for the six Republicans and one Democrat who are seeking the gubernatorial nominations in the June 3 primary. Outgoing Gov. Toney Anaya set the stage earlier this year by appointing a commission to examine possible cost-saving measures at state colleges and universities.

The field of Republican candidates includes Garrey E. Carruthers, professor of agricultural economics at New Mexico State University and a former state G.O.P. chairman. The lone Democrat, Ray Powell, was the vice-president of Sandia National Laboratories in Los Alamos.

Ohio. Voters will choose between the Democratic incumbent, Richard F. Celeste, who has concentrated state resources on bolstering academic quality and the research capabilities of public colleges and universities, and former Gov. James A. Rhodes, whose 15-year tenure as governor included a dramatic growth in higher education.

The Ohio affiliate of the American Federation of Teachers (A.F.L.-C.I.O.) has endorsed Mr. Celeste, but the state N.E.A. organization has not yet backed a candidate.

Governor Celeste has identified education as one of his top three campaign themes. Any discussion about higher education during the campaign is likely to center around the ability of Ohio's colleges and uni-

1986

Completed Primaries

STATE	DEMOCRAT
Illinois	Adlai Stevenson
Nebraska	Healey
Ohio	Richard F. Celeste
Oregon	Neil R. McMillen
Pennsylvania	Robert P. Casey
Texas	Marvin Davis

Forthcoming Primaries

DATE	STATE
May 27	Arkansas
June 3	Alabama California Iowa New Hampshire South Carolina
June 10	Arkansas Maine South Carolina
June 24	Alabama South Carolina
August 5	Kansas Michigan
August 7	Tennessee
August 12	Colorado Georgia
August 19	Wyoming
August 26	Alaska Oklahoma
September 2	Florida New Mexico Georgia
September 9	Arizona Connecticut Maryland Minnesota New Jersey New York Rhode Island Vermont Wisconsin
September 16	Massachusetts Oklahoma
September 20	Hawaii
September 30	Florida

* Incumbent

¹ Won the Democratic nomination instead

² Barred by state law from running

³ Declined to seek re-election

versities to contribute to economic development.

At some campaign Mr. Rhodes has been as a 1970 decision to send the National Guard to Kent State. During anti-war demonstrations at the university, the killed four students and nine. Mr. Rhodes has said he had a duty to perform.

Texas. Democratic Gov. White's support for a controversial educational bill in the May 3 primary make him more vulner-