

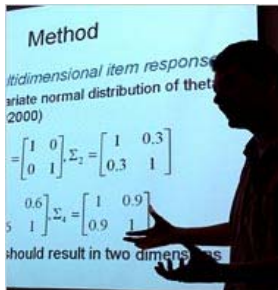
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As Test-Taking Grows, Test-Makers Grow Rarer

By DAVID M. HERSZENHORN
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Sz-Shyan Wu is not a Cuban baseball star or a dissident musician. But in urging the United States government to grant him a work visa, the New York State Education Department is arguing that Mr. Wu, too, has talents so rare that bureaucracy must be cut and a red carpet rolled out.

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Carmel Zucker for The New York Times
 Jonathan Weeks, a graduate student at the University of Colorado, presenting a measurement-research project this week.

Multimedia



Video: Shortage of Testing Experts

Mr. Wu is a psychometrician or, in plain English, an expert on testing. And testing experts are in high demand.

With federal law requiring wider testing of schoolchildren, the nation faces a critical shortage of people like Mr. Wu with the mathematical, scientific, psychological and educational skills to create tests and analyze the results. The problem has sent states, testing companies and big school districts into a heated hiring competition, with test companies offering salaries as high as \$200,000 a year or more plus perks.

A result is a peculiar outcome of the No Child Left Behind act. Psychometrics, one of the most obscure, esoteric and cerebral professions in America, is also one of the hottest.

These experts are needed in virtually every aspect of developing, administering and scoring exams, from deciding what test will best measure certain skills to drawing up questions and answer sheets. Doctoral programs are producing at most 50 graduates a year in the field.

"This was always a very, very tight, small group of individuals prior to No Child Left Behind," said Wayne J. Camara, vice president for research and psychometrics at the College Board, which publishes the SAT and Advanced Placement exams. "Since No Child Left Behind, it has just gotten ridiculous."

Mr. Wu, who came from Taiwan for graduate school and who has adopted the name Bryan, got his Ph.D. from the University of Georgia last June. In months, he had a \$74,597-a-year post in New York.

"I also had a couple of other job opportunities," he said, in halting but good English.

In a state with more than three million students and extensive testing programs, Mr. Wu is now the lone official with the title "psychometrician," though others have related

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skills. New York is sponsoring him for a special work visa, for foreigners with "a body of specialized knowledge."

Deborah L. Bandalos, a professor of educational psychology at Georgia who had only praise for Mr. Wu, said she was not surprised that he had a high-level position..

"I am sure they would have rather had somebody with more experience," Professor Bandalos said, "but the fact is there just isn't anybody. All the big testing companies are hiring people with experience because they can pay more."

Government and industry officials warn that the shortage of experts could undermine the testing process and lead to errors, with consequences like children's being wrongly denied promotion and schools being mistakenly labeled as failing.

Already, they say, many states and school districts lack officials trained to oversee testing and make effective use of score data. The states are being hardest hit because they desperately need psychometricians to supervise their multimillion-dollar contracts with test publishers but are routinely outbid not just by testing firms but also by colleges, research groups and other industries.

Government positions are typically Civil Service, with salaries starting around \$50,000 a year, far less than

business. But even with the ability to offer bonuses, stock options and profit sharing, the major test publishers are struggling, too. Nearly all have openings.

Mr. Camara and other testing executives cited the lack of psychometricians as a chief concern at a recent meeting with Education Secretary Margaret Spellings, calling it one of the few obstacles to meet the growing demand for tests, now at 45 million a year nationally.

The executives urged federal action, including government-paid fellowships to increase the numbers of students entering graduate programs to become test experts.

David Dunn, the acting under secretary of education, said that the Bush administration was addressing the dearth of psychometricians in its wider efforts to raise the number of math and science graduates and that officials had confidence in the testing industry.

"The industry has assured us that they have the capacity to get the job done," Mr. Dunn said. "We haven't focused specifically on psychometrics versus nanotechnology versus other areas. There's a general recognition that we need to beef up or math and science instruction."

Robert A. Schaeffer of FairTest, a watchdog group, said competition for psychometricians had many switching employers for higher salaries, meaning that they typically had less experience with employers' test products. State agencies, Mr. Schaeffer said, had short staffs, resulting in less oversight.

"All of these reduce quality control, makes the possibility of errors greater," he said.

Psychometricians worry that the shortage could lead to breaches of standards.

Still, the situation has delighted some, who see their industry gaining prestige and say that properly used tests can be a powerful tool in improving instruction and student achievement. Of course, they also see brightening financial prospects.

"It's a good day to be a psychometrician," Gary Cook, an education researcher at the University of Wisconsin, said. "There's a limited set of people who are qualified."

Mr. Cook, who works on testing in the Milwaukee public schools, also has a consulting

business.

"I have turned down jobs," he said.

Graduate students are not the only subjects being courted.

Mark D. Reckase, a professor of measurement at Michigan State University, said, "I get calls, oh, every couple of months from either a headhunter representing some unknown company or directly from one of the companies saying they are looking for somebody in an upper-management position and we can talk about stock options and the corporate perks."

Without psychometricians, the basic calculations cannot be made. For instance, the translation of a raw score of 40 correct answers out of 50 questions into a scale score of, say, 720 out of 800 on a standardized test is a result of their work.

These experts also wrestle with sophisticated questions about how to measure learning.

When the Michigan testing system suffered breakdowns three years ago, the state combined a \$114,305-a-year Civil Service position with an additional contract worth additional tens of thousands of dollars to persuade Edward D. Roeber, head of state testing from 1976 to 1991, to return. Dr. Roeber, 62, said he went back knowing that he could secure a state pension and still find lucrative private work after retiring.

"If I were to go to a major testing company, I'd probably easily be able to pick up an additional \$50,000 to \$75,000 a year plus the bonuses," he said.

But Dr. Roeber said he also recognized the rewards of public service, which he emphasized in recruiting Joseph Martineau, the other psychometrician on his staff.

"I said to him flat out, 'If you are interested in salary, if that's your primary concern, I can't touch these other companies,'" Mr. Roeber said. "But I told him, 'I am going to give you experience that's invaluable, and you are going to have exposure in this state and across the nation where in these other companies you'd be buried six layers deep.'"

Dr. Roeber admitted fretting when he heard that Mr. Martineau was going on vacation to Monterey, Calif., the home base of CTB/McGraw-Hill, the large test publisher.

"I know he's already had offers," Dr. Roeber said. "He's got a wife who wants to stay in Lansing."

All the major companies have openings, and like big law firms, many now aggressively recruit graduate students with well-paid summer jobs and other enticements.

"It's incredibly hard to recruit people," Mr. Camara said. "We have three openings, doctoral-level openings at the College Board, and we have had them since the end of 2005 and we'll be very lucky if we fill them by Labor Day."

In a report on challenges facing the testing industry, Tom Toch of Education Sector, a nonpartisan research group, said his top recommendation was that the federal government pay to train 1,000 psychometricians over five years.

Among graduate students in psychometrics, some are former math and science teachers. "I had a passion for science, I had a passion for teaching," said Bud Talbot, who taught physics before going to graduate school at the University of Colorado. "After seven years, I felt like I had grown professionally as much as I could."

Mr. Talbot said the new interest in psychometricians struck him as odd. "I don't feel like a celebrity," he said. "But I feel like I am definitely following something I am interested in."

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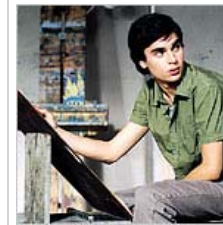


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