



# THE QUALITY AND AVAILABILITY OF PENNSYLVANIA'S TEACHERS

Special Report

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While the overall supply of qualified teachers in Pennsylvania is adequate, there are areas of shortage and disturbing trends that suggest deeper problems may be on the horizon, according to a report published by The Education Policy and Leadership Center (EPLC) based on a 16-month review of the quality and availability of teachers across the state.

Quality teaching is perhaps the most necessary ingredient of academic achievement. For most states, the question is whether there are enough good teachers for all classrooms. Recent national education policy places a premium on quality, requiring that all teachers be “highly qualified” by the end of the 2005-06 school year.

EPLC examined teacher quality issues, current state policy, the increasing role of the federal government in generating state policy, and the availability of qualified teachers in Pennsylvania. The review included surveying school superintendents and the education deans or chairs of the state’s teacher preparation institutions, and concluded with a series of policy recommendations.

The good news is that Pennsylvania is not burdened by the kind of severe teacher shortages that some fast-growing states, such as California, are experiencing. School superintendents in Pennsylvania, however, report a shortage of teachers in certain subjects, particularly the sciences and higher mathematics. Some urban school districts struggle to find qualified teachers for open positions. And minority teachers are underrepresented in public school classrooms.

## Quality Teaching Matters

Research provides strong evidence that quality teaching is a critical factor in improving student academic achievement. For example:

- Recent studies in Tennessee and Texas suggest the effect of teacher quality on student performance outweighs other school variables<sup>1</sup> and can even be more influential than student and family background characteristics.<sup>2</sup>
- Having high quality teachers, especially in consecutive years, can close the achievement gap between disadvantaged and non-disadvantaged students.<sup>3</sup>

- Improved teacher quality is considered the chief reason Connecticut and North Carolina have seen strong and sustained gains in reading achievement over the past several years.<sup>4</sup>

Studies suggest quality teachers have several common characteristics, including a grasp of the subjects they teach, an ability to convey subject matter to diverse range of students using a variety of strategies, good verbal skills, and successful experience.

Pennsylvania school superintendents surveyed by EPLC all reported that in hiring teachers they look for evidence of academic prowess and pedagogical skill. Most also look for less tangible skills and attributes they feel contribute to success in the classroom, such as creativity, problem-solving, verbal skills, flexibility, teamwork, and compassion.

States address teacher quality a number of ways. For example:

- To ensure content knowledge, secondary teachers are usually required to have at least the equivalent of an academic major or minor in the fields in which they will teach.
- To ensure pedagogical knowledge and skill, teachers are usually required to complete teacher education programs and clinical experiences such as student teaching.
- States generally try to ensure good verbal skills among teachers through tests of verbal ability and through student teaching experiences.
- To promote successful experience, some states support induction/mentoring programs for new teachers and continuing professional development throughout their careers.

## Pennsylvania Policy

Pennsylvania requires teachers to obtain a state teaching certificate appropriate for the grade level and subject the applicant will be teaching. Requirements are relaxed, however, when teacher shortages trigger the use of emergency permits to fill vacant positions.

## Certification

Basic requirements for a Level I certificate include earning a bachelor's or master's degree in an approved teacher education program and receiving a recommendation from the program's certification officer. The certificate is valid for six years of teaching.

New standards require aspiring teachers to complete at least three semesters of college-level liberal arts courses and earn a minimum grade point average before entering a teacher education program. The minimum GPA will rise to 3.0 by 2003-2004.

Applicants for certification must also pass a series of state examinations – PRAXIS tests – that measure mathematics, reading, writing, and subject-area knowledge.

Teachers must earn a Level II certificate within six years to continue teaching in the public schools. To do so, they must teach at least three years, earn 24 post-baccalaureate credits, complete a teacher induction program, and meet assessment requirements.

## Mentorship

Pennsylvania is one of only eight states that require, but do not fund, induction programs for first-year teachers. Every school district, however, is required to submit a plan to the state Department of Education for the induction of first-year teachers. These plans must include a “mentor relationship” between the first-year teacher and either an experienced teacher or an induction team. Without state support, the intensity of induction programs varies widely.

## Professional Development

Pennsylvania requires all teachers to complete at least 180 hours of continuing professional education every five years. And school districts must submit professional development plans that assess staff development needs and at least provide opportunities for teachers to study graduate-level courses, take in-service courses, and participate in other professional development.

In 2001, the state began its Professional Development Assistance Program, which tests all practicing academic teachers in mathematics and reading to measure their knowledge of the content of state standards at the appropriate grade level. According to the state, the results are used to improve professional development programs and are confidential.

## Post-Retirement Teaching

Pennsylvania permits retired teachers to return to the classroom if a teacher shortage creates an emergency and the district first tries to hire non-retired teachers to fill the open positions.

Returning retirees are allowed to teach 95 days a year without losing their state retirement benefits. After 95 days,

a penalty is assessed against those benefits. Also, teachers who retire and immediately begin working under an emergency exception may have their pensions “frozen” and be enrolled in a new post-retirement pension separate from their first.

## Emergency Permits

School districts can sometimes use emergency permits to fill teaching positions. These permits are issued to college graduates regardless of whether they have had any preparation in teaching or the specific content to be taught.

The Department of Education most often issues emergency permits when districts cannot find certified applicants to fill vacancies and when district need to fill long-term substitute positions. Local superintendents can also issue emergency permits to fill day-to-day substitute positions for up to 15 cumulative days.

## The Expanding Federal Role

The No Child Left Behind (NCLB) Act, which became law in 2002, sets national policy for all children, teachers, and schools, including requirements that every state establish academic standards, test all children in grades 3-8 each year, and that all children achieve proficiency on state standards within 12 years.

Federal policy also requires that all teachers be “highly qualified” by the end of the 2005-06 school year. They must be fully certified and cannot have had any certification requirements waived on an emergency basis.

Elementary school teachers must also hold at least a bachelor's degree and earn passing scores on a rigorous state test of reading, writing, math, and other basic parts of the elementary curriculum. Middle and high school teachers, too, are required to have a bachelors degree and they must pass a core content area test or an academic major or equivalent coursework.

The EPLC review found that Pennsylvania teachers meet the criteria with the exception of those teaching on emergency certificates, those teaching in fields for which they are not certified – a physics teacher who teaches chemistry, for example – and seventh and eighth grade teachers who do not have a content area certificate.

## Availability of Qualified Teachers in Pennsylvania

Pennsylvania faces teacher shortages in some areas and there is some evidence that more serious problems could develop in coming years. What Pennsylvania is not experiencing is a crisis as deep as those in several rapidly growing states where rising student enrollments and teacher retirements and high turnover are creating serious teacher shortages.

## Shortages By Subject

Several teaching positions are difficult to fill. Shortages are reported among teachers of physics, chemistry, biology, general science, world languages, special education, technology education or industrial arts, and mathematics, especially higher level math courses.

In the EPLC survey, 16% of the superintendents who responded said there is an insufficient number of candidates for hard-to-fill positions. Another 39 percent said there are not enough quality candidates for those subjects.

The number of teaching certificates are down in all subjects that superintendents say are hard to fill. World language certificates fell 33% from 1996-1997 to 2001-2002, and physics certificates fell nearly 31%. In fact, of all of the hard-to-fill subjects, only biology certificates increased over the past five years – by less than 1%.<sup>5</sup>

Another concern is a high rate of turnover among teachers in Pennsylvania who teach hard-to-fill positions such as biology and chemistry. The rate at which biology teachers and chemistry teachers left their districts increased 45% between 1997-1998 and 2001-2002.<sup>6</sup>

## Few Minority Teachers

Racial and ethnic minorities are under-represented in public school classrooms across Pennsylvania, accounting for only 6.3% of teachers in 2001-2002. Minorities account for 21.6% of all public school students and 15.8% of the state's general population.

Only about 5% of Pennsylvania's public school teachers are African American; .7% are Hispanic; and only .3% are Asian.

## Shortages In City Schools

Urban school district, in particular, have difficulty hiring and retaining quality teachers.

Evidence of the problem is reflected in the fact that in 2001-2002, half of the 5,174 emergency permits needed to fill vacant full-time positions were issued in the Philadelphia School District. Another 20% of emergency permits to fill full-time positions were in six other urban districts in the state.

## Emergency Permits Up

Wider use of emergency permits was not limited to urban school districts in recent years. Pennsylvania schools were issued 16,800 emergency permits during the 2001-2002 school year.

More than half of the permits issued were for day-to-day substitute positions – evidence of how difficult it is to find certified substitute teachers. The 5,174 emergency permits to fill full-time positions in 2001-2002 is a 350% increase over the 1,141 issued in 1999-2001.<sup>7</sup>

## Exporting Teachers

Pennsylvania's staffing problems come at a time when there is no overall shortage of classroom teachers being certified by the state's colleges and universities. Each year, more teachers are certified in Pennsylvania than the state's public schools hire.

Lately, Pennsylvania has been a net exporter of teachers with graduates recruited to teach in Virginia, North Carolina, South Carolina, Texas, and other states. Recruiting pressure is likely to increase with the federal requirement to staff all classrooms with highly qualified teachers.

## Regional Imbalance

Deans of education programs report that many graduates of teacher preparation programs who do not enter the profession decide they do not want to relocate where the jobs are, which is largely in urban districts. Such preferences contribute to teachers shortages in urban districts, particularly Philadelphia, York, Harrisburg, and Reading.

Teacher turnover is also high. Although Pennsylvania's 13% turnover rate is less than the national average of 16%, one-third of new teachers in Pennsylvania leave the profession within three years and half of them leave within five years.

National studies suggest they leave for reasons that include poor salaries, lack of administrative support, lack of student discipline, and poor student motivation.

## Recommendations

The Education Policy and Leadership Center (EPLC) followed its review of teacher quality and supply in Pennsylvania with policy recommends in several areas, including promoting and professionalizing teaching, improving the preparation of teachers, and monitoring reforms.

Summaries of key EPLC recommendations follow. For more information, see the complete report, *Head of the Class: A Quality Teacher In Every Pennsylvania Classroom*, available on the EPLC website at this address: [www.eplc.org/teacherquality.html](http://www.eplc.org/teacherquality.html).

## Promoting Teaching

An important first step toward improving the state's ability to attract and retain high quality teachers is to recognize and value the profession. EPLC recommendations in this area include:

- Policymakers, educators and others should genuinely and consistently treat teachers as a key part of Pennsylvania's efforts to strengthen public education and promote the recruiting of teachers as an important public interest.
- The state should terminate the Professional Devel-

opment Assistance Program and use the funds to support training in the use of new evaluation forms. Superintendents report that the data from the PDAP test is not especially useful in improving professional development.

- The state should modify school district planning requirements so that a teacher retention, support, and leadership development plan is integrated into each district's strategic plan.

- The state should consider adjusting the School Code minimum teacher salary of \$18,500 per year, established in 1988-89. Low salaries are factors in teacher turnover and recruiting.

### Preparing Teachers

EPLC recommends that policymakers explore ways to reinforce existing quality initiatives and to monitor their progress to ensure that the desired results are achieved without significant unintended consequences. The recommendations include the following:

- When reviewing policy related to teacher preparation this year, the state should survey teacher preparation institutions and school districts to determine whether reforms are improving the quality of teaching candidates and not hindering the hiring of quality teachers.

- The state should provide school districts with funds to pay for substitutes as a way of encouraging classroom teachers to participate in teacher preparation institutional reviews.

### Easing Shortages

Among the EPLC's recommendations are several for easing specific staffing problems in Pennsylvania schools. The recommendations include:

- The state General Assembly should enact a targeted teacher recruitment program focused on districts having serious problems filling teaching positions with qualified candidates.

- Increasing the number of qualified minority teachers must be a state goal and steps should be taken to address the issue, including recruiting Pennsylvania residents graduating from historically black colleges and universities outside the state.

- The state law that limits retired teachers to teaching 95 days per year if they return to the classroom should be revised to increase the limit to 190 days, allowing experienced educators to teach an entire school year and participate in professional development.

- Future proposals to enact early retirement incentives for teachers should consider the likely impact on school districts' efforts to retain highly qualified teachers.

Opportunities to address these and other issues will arise in 2003, when the State Board of Education and the Pennsylvania Department of Education are scheduled to review policies that guide the preparation and certification of teachers.

### References

*Head of the Class: A Quality Teacher In Every Pennsylvania Classroom, The Education Policy and Leadership Center Teacher Quality and Supply Project.* Harrisburg, PA: The Education Policy and Leadership Center. 2003. (Available online at [www.eplc.org/teacherquality.html](http://www.eplc.org/teacherquality.html)).

This Special Report, written by Jeffery Fraser, is based on the above-referenced report. It is not intended to be an original work, but a summary for the convenience of our readers. References noted in the text follow:

<sup>1</sup> Ferguson, R. (1991). "Paying for Public Education: New Evidence on How and Why Money Matters." *Harvard Journal on Legislation*, 28, (2).

<sup>2</sup> Sanders, W., & Rivers, J. *Cumulative and Residual Effects of Teachers on Future Student Academic Achievement.* Knoxville, TN: University of Tennessee Value-Added Research and Assessment Center. 1996.

<sup>3</sup> Haycock, K. *Good Teaching Matters: How Well-Qualified Teachers Can Close the Gap.* Washington, D.C.: The Education Trust. 1998.

<sup>4</sup> Darling-Hammond. (2000). Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives*, 8 (1). (<http://epaa.asu.edu/epaa/v8n1>).

<sup>5</sup> Based on data from *Status Report on Pennsylvania's Level I Teachers.* Harrisburg, PA: Pennsylvania Department of Education. 2001 and 2002.

<sup>6</sup> Based on data from *Status Report on Pennsylvania's Level I Teachers.* Harrisburg, PA: Pennsylvania Department of Education. 2002.

<sup>7</sup> Ibid.