



**Key Issue:**

**Recruiting Quality Mathematics, Science, and  
Special Education Teachers for Urban Schools**

**2006**



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## **Scenario: South High School Faces Closure**

David, his wife, and son just moved from the suburbs back to the neighborhood where David grew up. Not much has changed. The buildings are shabby, kids still hang out on the streets on school days, and the community has all but given up on its neighborhood schools. Despite this dim reality, David wants to make a difference for the children in this community. David has been a mathematics teacher for five years, and now his home district is offering a higher salary for his position and student loan forgiveness as incentives to come back to where he grew up. In his new position, he hopes to get troubled kids off the streets and back in South High School to make learning about mathematics and its everyday applications fun again.

Dana started teaching at South High School one year ago. She teaches special education. She grew up in a rural community and has always wanted to teach the neediest children in the neediest areas. This is her first teaching assignment, and she was recruited heavily out of college because of her specialty and training. She could have gone to almost any rural or urban school, but she chose South High because she too wanted to make a difference in the lives of its students.

David and Dana both struggled during their first months in their new positions. There were few opportunities to meet with experienced teachers, and school leaders rarely checked in on their progress. As expected, the students were difficult to teach, mostly because they knew that no one expected them to succeed. The parents and the community expressed little interest in improving student achievement because many argued that they have given up on the school. David and Dana both found it very difficult to continue to be optimistic and idealistic under these conditions and wondered if they had made the right decision.

In January, the school board met to implement policies to reform the school district's three high schools. Rumors circulated about how drastic the measures might be and how they would impact staff and students. The school board listened to hours of testimony from community leaders, students, and teachers. In February, the board made the announcement that it was considering closing the school for one year to reorganize into smaller learning communities. It cited statistics that less than one third of students entering as freshman were actually graduating, and teacher turnover was at an all-time high. Class sizes were much too large, and working conditions were unacceptable.

David and Dana were both devastated and regretted their decisions to dedicate their careers to hard-to-staff schools and subjects.

What steps can the school district take to improve its efforts to recruit high-quality teachers in the face of these challenges? To what extent do teacher working conditions play a role in the overall success of the school? How can those working conditions be changed?

## Benefits

Strong recruitment strategies for mathematics, science, and special education teachers help urban schools and districts do the following:

- **Get high-quality teachers into the neediest schools.** The shortage of mathematics, science, and special education teachers in the nation’s urban schools is critical. In 2000, a report called the Urban Teacher Challenge indicated that the nation’s largest urban school districts reported immediate needs for mathematics (95 percent), science (98 percent), and special education teachers (98 percent). A lack of highly qualified teachers in these areas is leaving students in urban classrooms without successful teachers, and ultimately leaving them behind. A strong recruitment strategy can help urban school districts to be competitive for teachers in shortage areas. Strategies—such as grow-your-own, financial incentives, and alternative licensure—can assist a district and school to be competitive in the job market.
- **Design a systematic recruitment effort that meets the needs of the district or school and thereby strengthen the candidate pool for mathematics, science, and special education teachers.** Schools and districts spend an inordinate amount of time randomly searching for teachers, especially in shortage areas such as mathematics, science, and special education. In 2003, The New Teacher Project released its study of hiring practices in urban school districts desperately in need of teachers in shortage areas. Research reveals that many districts and schools are wrapped up in red tape and bureaucracy to the extent that even if good candidates for shortage areas apply, they fail to hire them. A systematic recruitment effort designed to meet the needs of a particular school or district not only attracts the right candidates, but also streamlines the process so that the candidates applying for the positions are most likely a good fit for the job.
- **Keep good teachers in the hard-to-staff positions.** Ultimately, urban schools not only need to recruit good mathematics, science, and special education teachers, they need to keep them there. Research shows that almost half of new teachers leave within the first five years of their career, and this number gets higher for urban schools. Schools and teachers must be committed to students in order to improve their achievement, and continuity is needed in key positions such as mathematics, science and special education. A strong recruitment program can get the right teachers into the right classrooms in the first place and then support them through strong induction, mentoring, and professional development programs. A strong commitment to this process gives urban schools and districts a better opportunity to retain the high-quality teachers they desperately need.

## References

Levin, J. & Quinn, M. (2003). *Missed opportunities: How we keep high-quality teachers out of urban classrooms*. New York: The New Teacher Project. Retrieved June 7, 2006, from <http://www.tntp.org/docs/reportfinal9-29.pdf>

Recruiting New Teachers Inc., Council of the Great City Schools, Council of the Great City Colleges of Education. (2000). *The urban teacher challenge: Teacher demand and supply in the great city schools*. Belmont, MA: RNT Inc. Retrieved June 7, 2006, from <http://www.cgcs.org/pdfs/utc.pdf>

## Tips

Remember to do the following when recruiting mathematics, science, and special education teachers for urban schools:

- Implement strategies that provide meaningful incentives for prospective teachers.
- Specifically target those teachers with the experience and education to meet the needs of your school.
- Build a relationship and craft a strategy with input from local institutions of higher education.
- View strategies as part of a larger effort to recruit and retain high-quality teachers for every subject at every grade level.
- Take advantage of the local supply of potential teachers.
- Use the Internet to increase the reach of recruitment efforts.
- Support new teachers through strong induction and professional development opportunities.
- Provide high-quality opportunities for people in other professions to transfer into teaching.
- Be selective in accepting candidates from alternative preparation programs.
- Broaden the diversity of prospective teachers.
- Work to improve the overall working conditions in urban schools.

## **Strategy 1: Partner With Institutions of Higher Education to Prepare Mathematics, Science, and Special Education Teachers to Work in an Urban Setting**

There needs to be a strong collaboration between teacher preparation programs and urban districts. Districts can work with the universities not only to increase the pipeline of teachers in shortage areas—such as mathematics, science, and special education teachers—but also to ensure that those teachers are prepared to meet the challenges of an urban district. Many alternative routes to certification are based at local universities and allow paraprofessionals, military personnel, and other professionals to transition into teaching into hard-to-staff subjects and classrooms. Through strong partnerships, districts can help evaluate the quality of university graduates and have a voice to reform teacher preparation programs.

### **Resource 1: Urban Teacher Education Partnership in St. Paul**

Minnesota State Colleges and Universities: Urban Teacher Education Partnership in St. Paul  
Website: <http://www.mnscu.edu/media/performance/2003/winter2003/w08.html>

Six Minnesota state colleges and universities are partnering with urban St. Paul School District to provide student teachers experience in the diverse city schools that increasingly will resemble Minnesota's classrooms of tomorrow. The program prepares teachers in hard-to-staff subjects to teacher in hard-to-staff schools.

### **Resource 2: Tufts University Urban Teacher Training Collaborative**

Tufts University Urban Teacher Training Collaborative  
Website: <http://ase.tufts.edu/education/projects/urbanteachers.asp>

The Urban Teacher Training Collaborative is a school-university, school-based, Master of Arts in Teaching program developed by Tufts University in conjunction with three Boston Public Schools (the Boston Arts Academy, Fenway High School, and Mission Hill School). The collaborative, which is an example of the Professional Development School model, reflects the partners' understanding of the needs of urban students and teachers. The mission of the collaborative is to help meet the need for good urban teachers through an innovative model for teacher training similar to the "residency" model used to train medical professionals.

### **Resource 3: Mathematics and Science Partnership of Southern New Jersey**

Rowan University's Mathematics, Computer, and Science Instructional Improvement Program  
Website: <http://www.rowan.edu/open/mcsiip/mspgrant.htm>

Rowan University has been awarded \$2.5 million to work with four southern New Jersey school districts in reforming mathematics and science instruction. The project will be used to unite the activities of higher education institutions, prekindergarten through high school systems, and

other partners to better support teacher development in mathematics and science as well as raise student achievement.

#### **Resource 4: Marian College and Greater Indianapolis Chamber of Commerce Partnership**

Marian College and Chamber Partnership

Website: [http://www.marian.edu/aboutmarian\\_newsbriefs.asp?ID=186](http://www.marian.edu/aboutmarian_newsbriefs.asp?ID=186)

In May 2006, Marian College and the Greater Indianapolis Chamber of Commerce announced a partnership that would provide annual scholarships for science, science education, mathematics, or mathematics education to students of employees of companies or nonprofit organizations that are members of the Chamber.

#### **Resource 5: The Partnership for Teacher Excellence in New York City**

New York City Department of Education's Partnership for Teacher Excellence

Website: [http://www.nycenet.edu/News/2005-2006/News\\_01\\_27\\_06.htm](http://www.nycenet.edu/News/2005-2006/News_01_27_06.htm)

The City University of New York, New York University, and the New York City Department of Education formed in 2006 the Partnership for Teacher Excellence to develop and implement a new model for teacher education to address the city's need for highly qualified, well-trained teachers in high-need areas such as mathematics, science, and special education.

#### **Resource 6: Teacher Quality Enhancement Grants**

U.S. Department of Education's Teacher Quality Enhancement Grants

Website: <http://www.ed.gov/programs/heatqp/index.html>

This website provides information about resources and funding available to state and local education agencies and teacher preparation institutions to better prepare and recruit new teachers.

#### **Resource 7: *Ahead of the Class***

Clewell, B. C., & Villegas, A. M. (2001). *Ahead of the class: A handbook for preparing new teachers from new sources*. Washington, DC: Urban Institute. Retrieved June 7, 2006, from [http://www.urban.org/UploadedPDF/ahead\\_of\\_the\\_class.pdf](http://www.urban.org/UploadedPDF/ahead_of_the_class.pdf)

This handbook sets out and describes the steps necessary to create a successful institutional partnership.

### **Resource 8: American Association of Colleges for Teacher Education**

American Association of Colleges for Teacher Education. (2005). *Partnerships for success*. Washington, DC: Author. Retrieved June 7, 2006, from <http://www.aacte.org/Publications/PartnershipsBrochure.pdf>

This brochure showcases partnerships with universities that facilitate school improvement, teacher preparation, and professional development.

### **Resource 9: The Benedum Collaborative**

West Virginia University's Benedum Collaborative  
Website: <http://www.hre.wvu.edu/benedum/>

This website provides an in-depth look at a collaborative effort between 28 public schools, five school districts, West Virginia University's College of Human Resources and Education, and the Eberly College of Arts and Science. The collaborative has redesigned West Virginia University's Teacher Education Program and established professional development schools. Public school teachers collaborate continuously with university faculty to provide learning experiences for teacher education students.

### **Resource 10: Capital Educators Collaboration**

Capital Educators Collaboration  
Website: <http://gsehd.gwu.edu/gsehd/Special+Projects>

George Washington University has developed a number of partnership programs with local school systems. This website presents the reasoning behind these partnerships, many of which provide alternative routes to certification. The website also gives an overview and contact information for each district-university partnership.

## **Strategy 2: Grow-Your-Own Urban Mathematics, Science and Special Education Teachers**

Urban districts need to encourage members of the community to consider teaching. These recruitment efforts should begin early, in middle school classrooms and through extracurricular activities that encourage students who excel in mathematics and science (or who have a passion for children with special needs) to pursue a career in teaching. By the time students reach high school, formal recruitment programs should be in place to provide encouragement, mentoring, training, and financial assistance toward certification.

Urban districts also should recruit paraprofessionals already assisting in mathematics, science, and special education classrooms as well as parents and community leaders looking to change careers. With encouragement, support, and high-quality alternative certification routes, members of the community can become effective certified teachers. These recruits know well the community's needs and challenges and represent cultural and racial differences within the urban district.

### **Resource 11: Aurora Public Schools' "Grow Your Own" Program**

Aurora Public Schools' "Grow Your Own" Program

Website: <http://www.aps.k12.co.us/hr/growyourown.html>

Aurora, Colorado, has instituted in its urban school district a program to recruit paraprofessionals already working with mathematics, science, and special education students to become certified teachers for those classrooms. The district provides to qualified candidates a stipend for tuition, books, and fees.

### **Resource 12: Illinois' "Grow Your Own" Teacher Education Initiative**

Illinois' "Grow Your Own" Teacher Education Initiative

Website: <http://www.isbe.state.il.us/rules/archive/pdfs/60ARK.pdf>

In 2004, the Illinois legislature enacted the teacher education initiative to prepare highly skilled teachers for hard-to-staff subjects, such as mathematics and science, in hard-to-staff schools. The goal is to recruit 1,000 teachers by 2016 and retain them for seven years.

### **Resource 13: Prezell R. Robinson Scholars Program**

Prezell R. Robinson Scholars Program, North Carolina

Website: <http://www.dpi.state.nc.us/scholarships/robinson.html>

The Prezell R. Robinson Scholars Program is designed to encourage high school students to pursue careers in teaching. The program is only available in low-wealth school systems with documented difficulty in recruiting qualified teachers. Robinson Scholars participate in system-sponsored activities designed to foster their commitment to teaching and enhance the likelihood they will be accepted to and complete an approved teacher education program. Upon graduation

from high school, Robinson Scholars are awarded a Prospective Teacher Scholarship Loan to pursue a program of study leading to teacher licensure in North Carolina.

#### **Resource 14: Urban Teacher Academy Project Toolkit**

Berrigan, A., & Schwartz, S. (2000). *Urban teacher academy project toolkit: A guide to developing high school teaching career academies*. Belmont, MA: Recruiting New Teachers.

This toolkit for promoting teaching and early recruitment includes guidelines for establishing and evaluating teacher career academies, identifying prospective teachers, and a comprehensive array of supports for recruiting promising students to the profession.

#### **Resource 15: Future Educators Association**

Future Educators Association, Phi Delta Kappa International  
Website: <http://www.pdkintl.org/fea/feahome.htm>

Future Educators Association is a national program for middle and high school students interested in exploring careers in education. Chapters exist around the country, and Phi Delta Kappa provides support and ideas for getting a program started. An advisor's handbook is provided when a school or district joins.

#### **Resource 16: South Carolina's Center for Educator Recruitment, Retention, and Advancement**

South Carolina's Center for Educator Recruitment, Retention, and Advancement  
Website: <http://www.cerra.org>

The center offers training to individuals who wish to become teacher cadet instructors and encourages academically able students who possess exemplary interpersonal and leadership skills to consider teaching as a career.

## **Strategy 3: Create High-Quality Alternative Routes to Certification**

Once candidates are interested in teaching and schools identify staffing needs, alternative routes to certification provide a path for moving certified teachers into the classroom. Alternative routes often are attractive to midcareer changers and other nontraditional prospective teachers who want to become certified teachers. A program's flexibility can allow teacher candidates to complete coursework and training toward certification while continuing to earn a living as a teacher of record, paraprofessional, or businessperson. Through collaborative efforts, states, districts, universities, and colleges can develop alternative routes that attract and prepare teachers to fill shortages in urban districts. No two alternative routes look alike, but researchers have begun to highlight several components of high-quality programs.

### **Resource 17: Alternative Certification Evaluation Template**

North Central Regional Educational Laboratory. (2002) *Alternative certification evaluation template*. Naperville, IL. Author. Retrieved June 7, 2006, from <http://www.ncrel.org/datause/tools/altcert2.php>

Using findings from a literature review of articles and reports that presented the results of evaluations of a variety of alternative certification programs, essential evaluation criteria characteristics of successful programs were formulated and constructed into a template. Users rate the extent to which the criteria are used in a program, and averages for typical components of an alternative certification program are computed and graphed.

### **Resource 18: Georgia State University's Special Education Alternative Teacher Preparation Program**

Georgia State University's Special Education Alternative Teacher Preparation Program  
Website: [http://education.gsu.edu/coe/content/news/special\\_ed\\_alt.htm](http://education.gsu.edu/coe/content/news/special_ed_alt.htm)

The Georgia State University Department of Education offers an alternative preparation program for special education that is a collaborative effort with schools in Cobb and Fulton counties. This program prepares qualified candidates to become fully certified special education teachers.

### **Resource 19: Utah State University's Special Education Alternative Teacher Preparation Program**

Utah State University's Special Education Alternative Teacher Preparation Program  
Website: <http://sped.usu.edu/ATP>

Utah State University offers a program to prepare special education teachers through an alternative preparation program to work with students with mild, moderate, and severe disabilities in the greater Salt Lake City area.

## **Resource 20: Project 5,000: Recruiting New Math & Science Teachers for U.S. Schools**

American Board for Certification of Teacher Excellence's Project 5,000: Recruiting New Math & Science Teachers for U.S. Schools

Website: <http://www.abcte.org/node/989>

On May 11, 2006, the American Board for Certification of Teacher Excellence launched a new initiative to recruit and certify 5,000 new mathematics and science teachers by 2009. The group, a national nonprofit organization, is offering its alternative certification program, Passport to Teaching, to states that agree to accept its credentials. To kick off this initiative, the group is hosting 17 events in Florida, Idaho, New Hampshire, and Utah to spread the word about the certification program for mathematics and science career changers. With new certifications in chemistry and physics in addition to current certifications in mathematics, general science, and biology, the group is recruiting teachers for some of the highest need subject areas.

## **Resource 21: NC TEACH**

North Carolina Teachers of Excellence for all Children (NC TEACH)

Website: <http://ncteach.ga.unc.edu>

NC TEACH is an alternative teacher preparation program designed to recruit, train, support, and retain midcareer professionals as they become licensed teachers in North Carolina. NC TEACH has a new effort to attract mathematics and science professionals who are interested in becoming teachers. The website provides detailed descriptions of the organization, program offerings, and helpful resources.

## **Resource 22: *Alternative Routes to Teacher Certification***

United States Department of Education. (2004). *Alternative routes to teacher certification*. Washington, DC: Office of Innovation and Improvement. Retrieved June 7, 2006, from <http://www.ed.gov/admins/tchrqual/recruit/altroutes/report.pdf>

This report presents elements of effective alternative routes to certification and then profiles six promising programs.

## **Resource 23: Boston Teacher Residency**

Boston Teacher Residency

Website: <http://www.bpe.org/btr>

The Boston Teacher Residency is an urban teacher preparation and certification program. During the 13-month program, Teacher Residents coteach with a Mentor Teacher in one of Boston's schools, take coursework, and receive \$10,000 during their year of service to a school. Teacher Residents earn a Massachusetts Initial Teacher License, a master's degree in education, and work toward a dual licensure in special education. The website lays out the structure of the program and answers frequently asked questions.

## **Strategy 4: Recruit Diverse Mathematics, Science, and Special Education Teachers for Urban Schools**

An overwhelming majority of teachers (84 percent) are white and female. That number does not correspond to the ethnic and racial makeup of most urban districts. Simply stated, students need role models and teachers who look like them to succeed. In a time when as many as one third of urban students are not graduating from high school, urban schools and districts must increase their efforts to recruit minority teachers, especially in areas such as mathematics, science, and special education.

### **Resource 24: *Minority Teacher Recruitment***

Torres, J., Santos, J., Peck, N. L., & Cortes, L. (2004). *Minority teacher recruitment, development, and retention*. Providence, RI: Education Alliance at Brown University. Retrieved June 7, 2006, from [http://www.alliance.brown.edu/pubs/minority\\_teacher/index.shtml](http://www.alliance.brown.edu/pubs/minority_teacher/index.shtml)

This publication reports on the work of Brown University's efforts to improve the pipeline of diverse teachers into hard-to-staff schools.

### **Resource 25: Tom Joyner Foundation**

National Education Association. (2005, January 3). *Tom Joyner Foundation partners with National Education Association* [Press release]. Retrieved June 7, 2006, from <http://www.nea.org/newsreleases/2005/nr050103.html>

The Tom Joyner Foundation announces a partnership with the National Education Association to distribute more than \$700,000 to encourage minority teachers to complete certification and ultimately to teach in hard-to-staff schools. Through the program, the prospective teachers will attend one of seven partner Historically Black Colleges and Universities to obtain certification.

### **Resource 26: Minority Teacher Recruitment Project**

Minority Teacher Recruitment Project, University of Louisville  
Website: <http://www.louisville.edu/edu/MTRP/mtrp.html>

The Minority Teacher Recruitment Project is a collaborative partnership between Jefferson County Public Schools and the University of Louisville to recruit and assist minority students in teaching.

## **Strategy 5: Offer Financial Incentives to Attract High-Quality Mathematics, Science, and Special Education Teachers to Urban Districts**

Teachers for hard-to-staff subjects—such as mathematics, science, and special education—are difficult to find, especially for traditionally hard-to-staff urban schools. Districts and states must consider paying these teachers differently to encourage them to consider such an assignment. Districts and states can offer financial incentives, including signing bonuses, student loan forgiveness and scholarships, housing assistance, and higher base salary for high-quality teachers.

### **Resource 27: America’s Pressing Challenge—Building a Stronger Foundation**

National Science Board. (2006, January). *America’s pressing challenge—Building a stronger foundation*. Arlington, VA: Author. Retrieved June 7, 2006, from <http://www.nsf.gov/statistics/nsb0602/nsb0602.pdf>

This report is a companion to *Science and Engineering Indicators–2006*, also published by the National Science Board. The report sounds an alarm regarding the low level of mathematics and science education in the country and calls on policymakers to implement certain policies, including improving the quality of mathematics and science teachers through more competitive compensation.

### **Resource 28: Study of Personnel Needs in Special Education**

Westat. (2002, May 7). *SPeNSE summary sheet: Recruiting and retaining high-quality teachers*. Rockville, MD: Author. Retrieved June 7, 2006, from <http://ferdig.coe.ufl.edu/spense/policymaker5.pdf>

This report is one in a series funded by the U.S. Department of Education to analyze personnel issues in special education. Salary is a factor reported by special education teachers as making a difference in their employment decisions.

### **Resource 29: Diversifying Teacher Compensation**

Azordegan, J., Byrnett, P., Campbell, K., Greenman, J., & Coulter, T. (2005, December). *Diversifying teacher compensation*. Denver, CO: Education Commission of the States. Retrieved June 7, 2006, from <http://www.ecs.org/clearinghouse/65/83/6583.pdf>

This paper provides a general overview of the issue of diversifying teacher compensation, reviews policy options, and provides a glance at what actions states and districts have taken to reform compensation.

### **Resource 30: *Better Pay for Better Teachers***

Hassel, B. C. (2002, May). *Better pay for better teachers: Making teacher compensation pay off in the age of accountability*. Washington, DC: Progressive Policy Institute. Retrieved June 7, 2006, from [http://www.ppionline.org/documents/Hassel\\_May02.pdf](http://www.ppionline.org/documents/Hassel_May02.pdf)

The 21st Century Schools Project at the Progressive Policy Institute argues the need for differential pay for teachers in hard-to-hire teachers and offers policy options and considerations for reforming teacher compensation.

### **Resource 31: Pay Levels Needed to Attract Mathematics and Science Teachers**

Milanowski, A. (2003, December 27). An exploration of the pay levels needed to attract students with mathematics, science and technology skills to a career in K–12 teaching. *Education Policy Analysis Archives*, 11(50). Retrieved June 7, 2006, from <http://epaa.asu.edu/epaa/v11n50>

This study explores the role of salary levels and other factors in motivating potential mathematics, science, and technology teachers.

### **Resource 32: Arkansas Emergency Secondary Education Loan Program**

Arkansas Emergency Secondary Education Loan Program  
Website: [www.arkansashighered.com/emergencyloan.html](http://www.arkansashighered.com/emergencyloan.html)

This program is for students pursuing secondary education teacher licensure in an accredited Arkansas public or private college or university in the following shortage areas: mathematics, chemistry, physics, biology, physical science, general science, special education, and/or foreign language. Merit-based scholarships are available for \$2,500 per academic year, or one half the total cost of tuition and fees, book and supplies, and room and board. Recipients must maintain a 2.5 cumulative GPA; juniors and seniors must maintain a 3.0 GPA in their major area of study.

### **Resource 33: California Assumption Program of Loans for Education**

California Assumption Program of Loans for Education  
Website: <http://www.csac.ca.gov/doc.asp?id=111>

In this teacher incentive program, recipients must agree to teach in a shortage and low-income school for up to four years in exchange for up to \$19,000 in student loan forgiveness. If participants teach in mathematics, science, or special education they are eligible for an additional \$1,000 in loan assumption benefits, and an additional \$1,000 if they teach in a school ranking in the lowest 20th percentile on the Academic Performance Index.

### **Resource 34: Louisiana Critical Teacher Shortage Incentive Program**

Louisiana Critical Teacher Shortage Incentive Program

Website: <http://www.legis.state.la.us/lss/lss.asp?doc=81075>

Newly certified teachers in elementary and secondary schools in the areas of mathematics, biology, chemistry, physics, or special education receive \$3,000 per year for their first four consecutive years in the classroom.

### **Resource 35: New York City Offers Stipend to Teachers**

Adreatta, D. (2006, April 19). Teachers to get ‘house’ money. *New York Post*, online edition. Retrieved June 7, 2006, from <http://www.nypost.com/news/regionalnews/67248.htm>

New York City schools will offer nearly \$15,000 in housing incentives to new recruits in an effort to lure experienced teachers in hard-to-staff subjects. Under the initiative, teachers certified in mathematics, science and special education with two years of experience would initially receive \$5,000 plus \$400 a month for two years in exchange for a three-year commitment to teach in a public middle or high school.

### **Resource 36: Pennsylvania Urban and Rural Teacher Loan Forgiveness Program**

Pennsylvania Urban and Rural Teacher Loan Forgiveness Program

Website: <http://www.pacode.com/secure/data/022/chapter121/subchapLtoc.html>

Applicants must spend the major portion of the school day during the school year teaching in a classroom at an eligible urban or rural school district in Pennsylvania. The program offers up to \$2,500 in forgiveness for each year that the teaching commitment is fulfilled and up to \$10,000 will be forgiven for any participant.

### **Resource 37: Rhode Island Teacher Reward Program**

Rhode Island Teacher Reward Program

Website: <http://www.risla.com/programs/reward.aspx>

For the first four years of teaching, there will be 0 percent interest on Stafford Loans (subsidized or unsubsidized). The program provides 250 awards to full-time teachers in the predicted shortage areas of mathematics or science. In order to qualify, one must be employed full-time and certified in Rhode Island. Minority applicants have high priority along with those teaching in an urban or high-needs school district.

## **Strategy 6: Support New Mathematics, Science, and Special Education Teachers in Their New Urban Classrooms**

Research shows that one third of teachers leave within the first three years of teaching and half leave after five years. Support for beginning teachers is critical to their success. Most urban schools and districts already struggle to recruit mathematics, science, and special education teachers, so it makes good sense to support them. This support can be offered through induction, mentoring, and professional development; quality programs have shown success in retaining new teachers.

### **Resource 38: *Keeping the Committed: The Importance of Induction and Support Programs for New Special Educators***

Boyer, L. & Gillespie, P. (2000, September/October). Keeping the committed: The importance of induction and support programs for new special educators. *TEACHING Exceptional Children*. 33(6), 10–15. Retrieved June 7, 2006, from <http://www.specialedcareers.org/pdf/keepcomm.pdf>

This article provides insight into the additional pressures new special educators face and outlines induction and professional development opportunities essential to the success of these new teachers.

### **Resource 39: *Learning the Ropes: Urban Teacher-Induction Programs and Practices in the United States***

Fideler, L., & Haselkorn, D. (1999). *Learning the ropes: Urban teacher-induction programs and practices in the United States*. Belmont, MA: Recruiting New Teachers.

This report is a national study of induction programs and details programs in 10 urban school districts. The report describes the many successes involved in helping new teachers become masters of their craft. It also provides a comprehensive review of induction literature from 1980 to the present.

### **Resource 40: New Teacher Center at the University of California, Santa Cruz**

The New Teacher Center at the University of California, Santa Cruz  
Website: <http://www.newteachercenter.org>

The teacher induction program is a mentoring and formative assessment system that has been successfully operating for 15 years. The New Teacher Center is beginning to document positive effects on student achievement with new teachers who receive comprehensive professional support.

### **Resource 41: Connecticut Beginning Educator Support and Training**

Connecticut Department of Education Beginning Educator Support and Training

Website: <http://www.state.ct.us/sde/dtl/t-a/>

This two-year program of mentoring uses a portfolio review process for assessment of a new teacher's readiness for professional certification beyond initial certification. The program is mandatory for all new teachers regardless of certification status.

### **Resource 42: California Beginning Teacher Support and Assessment**

California Beginning Teacher Support and Assessment

Website: [http://www.btsa.ca.gov/BTSA\\_basics.html](http://www.btsa.ca.gov/BTSA_basics.html)

This state-funded program is designed to support the professional development of new teachers.

### **Resource 43: Louisiana Framework for Inducting, Retaining and Supporting Teachers**

Louisiana Framework for Inducting, Retaining and Supporting Teachers

Website: <http://www.doe.state.la.us/lde/pd/625.html>

This website features a document titled “The Induction Component,” which is a manual for districts that want to create induction programs—from agendas for orientation sessions to worksheets to fliers.

### **Resource 44: *Cultivating High-Quality Professional Development***

Exstrom, M. (2002). *Cultivating high-quality professional development*. Denver, CO: National Conference of State Legislatures.

This comprehensive policymaker's guide to teacher professional development includes a policy road map, a snapshot of state actions, frequently asked questions, and resources for stakeholders in their work with state policymakers.

### **Resource 45: *Keeping America Competitive***

Coble, C., & Allen, M. (2005, July). *Keeping America competitive: Five strategies to improve mathematics and science education*. Denver, CO: Education Commission of the States. Retrieved June 7, 2006, from <http://www.ecs.org/clearinghouse/62/19/6219.pdf>

This report is the result of a gathering of top thinkers for a conference at the Wingspread Conference Center. The report outlines five strategies to improve mathematics and science education, including support for teacher professional development and learning.

## **Strategy 7: Improve Working Conditions for Mathematics, Science, and Special Education Teachers in Urban Schools**

One of the biggest complaints of teachers in urban schools is the work environment. New teachers often cite lack of support and guidance, little parental involvement, few materials, and old buildings as major factors in their decision to stay in or leave their classrooms. Districts must work to improve working conditions in order to retain teachers in shortage areas such as mathematics, science, and special education.

### **Resource 46: Teacher Working Conditions**

Center for Teaching Quality—*Teacher Working Conditions: What We're Doing*

Website: <http://www.teachingquality.org/twc/whatwedo.htm>

This website provides an overview of the Center for Teaching Quality work with several states and districts to assess teacher working conditions. The website also links to what the center has learned from its surveys and reports issued to the states.

### **Resource 47: The School Improvement Self-Study**

School Improvement Self-Study

Website: <http://www.cprd.uiuc.edu/self-study>

The School Improvement Self-Study is one way for middle schools and high schools to gather reliable data about their practices and progress that will assist them in improving the teaching and learning process. The self-study consists of a set of surveys for students, teachers, and principals.

### **Resource 48: The National Standards for Parent/Family Involvement Programs**

The National Standards for Parent/Family Involvement Programs: An Implementation Guide for School Communities

Website: [http://www.pta.org/archive\\_article\\_details\\_1118251710359.html](http://www.pta.org/archive_article_details_1118251710359.html)

This practical tool promotes meaningful parent and family participation, raises awareness regarding components of effective programs, and provides guidelines for schools that wish to evaluate and improve their programs.

## **Real-Life Example: Illinois Grows its Own Teachers**

In 1994, the Illinois legislature enacted PL 93-802, the Grow Our Own Teacher Education Act. This legislation was a key provision in Illinois' effort to recruit high-quality teachers from within the state. The legislation was intended to prepare highly skilled, committed teachers who will teach in hard-to-staff schools and hard-to-staff teaching positions and who will remain in these schools for substantial periods of time. This initiative attempts to recruit and prepare not only paraprofessionals but also a diverse group of parents and community leaders to serve as educators for the state's low-income students. The ultimate goal is to add 1,000 teachers to low-income and other hard-to staff schools by 2016 and to increase the average retention rate from 2.5 to 7 years. The state hopes that this program will assist urban schools to recruit teachers in shortage subject areas such as mathematics, science, and special education.

The initiative does not provide a shortcut or an alternative to the traditional means of attaining teacher certification. Participants attend teacher preparation programs to receive their bachelor's degrees and become fully licensed teachers by the state. Student loans for teachers who remain in the schools for at least five years will be forgiven.

Each year, the state allocates funding to the state Board of Education to make grants to a consortium of providers that will carry out preparation programs. The consortium must consist of at least one teacher preparation institution, a community-based organization, and a school district.

The legislature approved a \$1.5 million planning grant in 2005, with awards to 10 communities, five of which are in Chicago: North Lawndale, Auburn Gresham, Kenwood/Oakland/Little Village, Logan Square, and Chicago Lawn. Grants also were awarded to Riverdale, Rockford, East St. Louis, Moline/Quad Cities, and Springfield. Each of these communities is forming cohorts of about 30 adult students to begin the program. The legislature also approved another \$3 million to begin implementation of the program.

### **Sources**

Illinois Public Law 93-802. Available at <http://www.ilga.gov/legislation/publicacts/fulltext.asp?Name=093-0802&GA=093>.

*Grow Your Own Illinois* website. Available at <http://www.growyourownteachers.org/index.htm>.