



## Reforms Under Way in Educator Preparation

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Below are several examples of higher education-based educator preparation programs that produce very high-quality beginning educators. These programs have undergone—or are in the midst of—massive reforms to meet the educational needs of their local communities.

### Preparing STEM Teachers

#### [Georgia State University NET-Q: Network for Enhancing Teacher Quality](#)

*A Teacher Quality Partnership Grant-Funded Initiative*

Georgia State University graduates approximately 500 teachers annually. GSU is also the largest producer of minority educators in the state of Georgia. In 2010, out of its 555 GSU completers, 194 were from under-represented groups. 94% of GSU's graduates who are employed in Georgia public schools are still in the classroom after one year of teaching and 92% at two years out. Faculty are significantly revamping the undergraduate and graduate level preparation programs at GSU through the NET-Q program. Some preliminary impact findings include:

- The NET-Q program has served to increase GSU teacher production in STEM areas by more than 12%.
- The number of male candidates and candidates from underrepresented groups has increased, including a 3.5% increase in African American candidates.
- NET-Q has expanded the ESOL endorsement program for elementary educators by more than 300%.
- The program has strengthened the pool of mentor teachers through faculty-developed mentoring modules and increased the number of mentors who work with GSU candidates by 65.
- The redesigned program ensures candidates understand how to conduct research, develop assessments, and analyze their students' achievement data.

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#### [Appalachian State University](#)

The Reich College of Education at Appalachian State University offers the largest undergraduate teacher preparation program in the state of North Carolina—preparing 16% of the state's beginning teachers. Graduates from the elementary preparation program at ASU are [outperforming graduates from other NC programs, according to the UNC Teacher Preparation Program Effectiveness Report](#). The Reich College of Education and the College of Arts and Sciences work jointly to produce quality mathematics and science teachers for K-12 education.

- Elementary education majors complete a series of four mathematics content and methods courses that are taught by faculty in both colleges. Candidates in these courses demonstrated significant learning gains on pedagogical content knowledge tests.
- Additionally, the RCOE offers an add-on certificate in Elementary Mathematics for in-service teachers, which prepares mathematics specialists for elementary school. This certificate program has been demonstrated to improve the mathematics and pedagogical knowledge of elementary mathematics teachers in comparison to peer groups.

- Secondary mathematics teaching candidates complete a major in mathematics and also complete a series of three mathematics education seminars and methods courses that are taught by faculty from both colleges.
- Elementary majors are encouraged to complete a science or mathematics secondary academic concentration. Middle school candidates must complete a content cognate. Secondary candidates complete a major within the field.

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### University of Washington

At the University of Washington, new science educators are pushing the boundaries of what beginning science teachers can do with middle and high school learners in high-needs classrooms. The preparation program is based on the idea of “ambitious teaching”—meaning the kinds of instruction that helps students of all backgrounds understand science deeply, engage in authentic forms of inquiry, and solve complex problems. Unique program elements include:

- **Web-Based Tools:** Beginning teachers are supported by a system of web-based tools, engineered to support advanced forms of instruction. The tools range from video of exemplary teaching practice to “discourse” guides that shape productive classroom conversations.
- **In-Service Support:** Mentor teachers and district science coaches have helped devise a suite of tools that support novice teachers in adopting ambitious teaching practices. Currently the university is working with seven major school districts to develop such tools.
- **Outcome Data:** In a recent classroom-based study to test the effectiveness of ambitious practices and tools, recent University of Washington graduates outperformed a comparison group of beginning teachers in four categories: identifying big ideas in the curriculum, adapting lessons based on students’ science ideas, helping students make sense of hands-on activity, and supporting students in constructing evidence-based explanations.
- **Professional Development Using Continuous Improvement Model:** Beginning teachers, mentors, and district coaches continue to advance the tools and routines. These innovations are cycled back into the web site <http://tools4teachingscience.org>.

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## **Preparing Principals and Leaders for Urban Schools**

### University of Illinois at Chicago Urban Education Leadership Program

The Urban Education Leadership Program at UIC uses an Ed.D. structure to allow four years of candidate development. The program, in partnership with Chicago Public Schools, begins with a full-year internship under the guidance of a mentor principal, followed by three years of on-the-job coaching. All coaches are former principals who have successfully executed transformation of urban schools. The impressive results of this program include:

- A 99% placement rate in administration positions for 8 years, with 77 UIC principal and assistant principals now leading urban schools.
- UIC-led high schools outperform CPS comparison schools in “freshman on-track” and graduation rates.
- 81% of all UIC-led elementary school outgained system norms on state achievement exams in 2011.
- Program graduates boast an 86% retention rate over the last 8 years.
- All UIC high school principals with at least one year’s data are showing significant gains on measures of school culture and climate.

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## Preparing Teachers Through High-Quality Clinical Experiences

### Student Teaching Model at St. Cloud State University (MN)

St. Cloud State transformed its student teaching experience by implementing a coteaching model. Coteaching provides two professionally prepared adults in the classroom, actively engaged with K-12 students for greater periods of time than does traditional student teaching. It also affords teachers an increased opportunity to incorporate coteaching pedagogy and grouping students in ways that are not possible with just one teacher.

- To date, the coteaching intervention at SCSU has provided coteaching training to more than 700 cooperating teachers and more than 2,000 teacher candidates.
- Researchers found, in four years, a statistically significant positive effect on reading and math scores for students in a cotaught classroom as compared to classrooms using the traditional model of student teaching.
- Additional analysis found students in a cotaught classroom statistically outperformed students with a single teacher.

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### Arizona State University

The Mary Lou Fulton Teachers College at Arizona State University—with more than 3,300 undergraduate students—implemented the iTeachAZ program to restructure its preparation of teachers. The program includes:

- **Enhanced teacher content expertise:**
  - Redesign of 40 lower-division courses
  - Development of seven general education science courses
- **A Senior Year Residency experience** that extends student teaching from a single semester to a full school year, enabling students to live the “full life” of a teacher.
- **Rigorous performance assessments** throughout the teacher preparation program and continuing into partner districts and schools.
- A school district partnership model through which **teacher candidates are embedded in diverse and culturally rich settings**, in turn supporting educational reform in partner schools.
- Results include:
  - In a partner school district, test results from 3rd- through 8th-grade students of first-year teachers showed that those taught by graduates of reformed TC programs **scored significantly higher in reading and math** than students of traditionally trained teachers.
  - Evaluation scores from a sample of teachers who graduated in 2009-2010 indicate that **88%** were rated as **effective (63%)** or **highly effective (25%)** in their first year of teaching.

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## Closing the Achievement Gap

### Stanford University

Among other work, the Stanford Teacher Education Program (STEP) and STEP alumni have started and transformed nine secondary schools – which have large numbers of low-income students, new immigrants, and students of color. Following are some results of these partnerships:

- 100% of students at Downtown College Prep are accepted to four-year universities when they graduate, despite 82% of 9th graders entering with a reading ability below the 7th-grade level.
- Eastside Prep (grades 6-12) has thus far achieved 100% success in preparing every graduate for a four-year college or university.
- The June Jordan School for Equity sent 95% of its first graduating class to college, including 73% to four-year colleges.
- The Hillsdale School has seen gains of over 200 points (on an 800 point scale) for economically disadvantaged students. 98% of its students are admitted to higher education, and half attend four-year colleges.
- The East Palo Alto Academy High School boasts a graduation rate of 86% (20 percentage points above the state average for minorities), a college admission rate of 96% of graduates, and achievement gains of 180 points on the Academic Performance Index (API) over the last seven years.
- 98% of Envision students (Envision schools partner with Stanford) in the class of 2008 enrolled in college, and 95% have stayed in college. 91% of Envision graduates from the classes of 2007, 2008, and 2009 enrolled in either a 2 or 4-year college, compared with 60% of all California high school graduates. Three Envision schools have achieved the highest API gain of any high school in their respective school districts in a given year.

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### [Vanderbilt University](#)

Vanderbilt's strong commitment to and history of effective engagement in public education is demonstrated by the depth and breadth of its collaborative initiatives with the Metropolitan Nashville Public Schools (MNPS) and other schools in the region. A small sampling of the most recent projects includes:

- **Peer-Assisted Learning Strategies and Response-to-Intervention**—Students and teachers in Nashville public schools benefit from these tools for better identifying students with learning disabilities and strengthening their achievement. Reading and mathematics performance has improved as a result of this work.
- **The Enhanced Language and Literacy Success** program provides language, writing, and literacy experiences to 702 low-income 4-year-olds in 13 Metro Nashville preschool classrooms. Results show reading gains for all students, with particularly high gains for English language learners.
- Another **Early Reading First** partnership includes 12 classrooms and a mobile classroom that travels to remote areas of rural Southern Tennessee. Children in these classrooms have shown steady gains on reading and writing assessments.
- **Reducing Severe Problem Behavior in Schools** is designed to create more supportive environments for MNPS children with problem behavior. Children in this program have shown significant reading gains.
- **Vanderbilt University Achievement Gap Project** works with African American male students from MNPS to strengthen their academic success. In 2009, the first year of the project, all 35 seniors who participated graduated, with most getting admitted to college.

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## **Preparing Teachers in Close Partnership with P-12 Schools**

### [California State University, Long Beach \(CSULB\)](#)

CSULB is a diverse and comprehensive urban university committed to providing affordable and highly valued educational opportunities for students through superior teaching, research, and creative activity. CSULB prepares the largest number of teachers in the CSU system. In 2011, this number was 740 credentials or 8.8% of all

credentials awarded in California. One initiative, **Linked Learning**, is a secondary education reform initiative in which CSULB and the Long Beach Unified School District are collaborating to prepare secondary teachers in LBUSD's small learning communities devoted to college and career readiness in career-themed academies. The major features of this project include:

- In more than half of CSULB teachers' classrooms, more than 30% of their students are English learners and more than 70% of their schools are described as inner-city, urban, or metropolitan schools that serve predominantly low-income students.
- Nonetheless, more than half of the CSULB teachers' schools score in the top half of all California schools in reading and math achievement.
- Data show that CSU teachers are significantly more effective than non-CSU teachers, when measuring gains of the individual students of first-year and second-year CSU teachers.
- Score differences between students taught by 1st-year and 2nd-year CSU and non-CSU teachers were greater than between students eligible and not eligible for free- and reduced-price meals.

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## **Diversifying the Profession**

### **Southern University at New Orleans**

This program recruits minorities, especially African-American males, to become teachers and provides for the continuing professional needs of those who enter/complete the program. This project increases the pool of certified teachers for the Greater New Orleans area, for the state of Louisiana and for the nation. There are currently 84 certification-only candidates enrolled in the program. Over the past two years the program enabled 16 candidates to achieve initial teacher certification at the early childhood and elementary levels.

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### **Howard University**

Howard University's Ready to Teach program recruits and prepares African American males as PK-12 teachers via an accelerated MAT program delivered via consortium model with 5 urban partner districts including Chicago, D.C., Prince George's County (MD), Houston, and Clayton County Schools (near Atlanta, GA). Ready to Teach has the following program features: an intensive 6-week Summer Institute; pre-service and in-service mentors; on-line learning communities and job placement. Over its four year tenure the program has produced 4 Teachers-of-the-Year for the participating districts. Additionally, the program is highly competitive having received 780 strong applications for 80 slots.

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## **School of Education as a Community Partner**

### **University of Northern Iowa**

Of Iowa's 32 teacher education and educational leadership programs, UNI's is the largest, and UNI has the most math and science education majors of any college or university in Iowa. Serving Iowa in one year, College of Education faculty and students contributed \$24,494,784 to Iowa's government and non-profit organizations. This economic impact includes student teaching, student and faculty outreach, grants and contracts, volunteer hours, and professional training.

- **UNI's New Jacobson Center for Comprehensive Literacy** will work with Iowa schools to improve literacy for all Iowa students.
- The **Reading Recovery Center** received \$1.6 million in the Investing in Innovation grant "Reading Recovery: Scaling Up What Works." In Iowa, the funds will provide preparation for 250 Reading Recovery teachers over a five-year period.
- In 2009-10, professional development workshops provided by the **Center for Early Education in Science, Technology, Engineering, and Mathematics** reached almost 1,200 teachers and child care providers in 32 Iowa counties across the state.
- Since 1991, 19 recipients of **Iowa School Administrators of the Year** received their training at UNI.
- **The 2011 Iowa Teacher of the Year**, Molly Boyle '96, is a UNI graduate.
- Shellie Pfohl '85 was appointed in 2010 by President Obama as executive director of the **President's Council on Fitness, Sports, and Nutrition**.

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