



The Education Trust

Closing the gaps in opportunity and achievement, pre-k through college.

April 13, 2010

Honorable Bart Gordon
Chairman
Committee on Science and Technology
2321 Rayburn House Office Building
Washington, D.C. 20515

Honorable Ralph M. Hall
Ranking Member
Committee on Science and Technology
2321 Rayburn House Office Building
Washington, D.C. 20515

RE: Reauthorization of the Robert Noyce Teacher Scholarship Program

Dear Chairman Gordon and Ranking Member Hall:

I write today to oppose the proposal in the Chairman's mark of the National Science Foundation reauthorization bill that would replace the requirement that recipients of Robert Noyce Teacher Scholarships teach in high-needs school districts with a weak incentive to teach in such districts.

This proposal is wrong and exactly opposite to the policy direction needed if we are to close the achievement gaps that separate low-income students and students of color from others. And we must close those gaps if we are to regain and sustain economic security and global competitiveness. Consider that a 2009 McKinsey and Co. report found that closing the achievement gap between low-income students and others would have boosted U.S. GDP in 2008 by \$400 billion to \$670 billion—or 3 to 5 percent.

The Noyce scholarship is an important tool in the effort to close the gaps in STEM subjects. It should not be weakened by eliminating the requirement that recipients teach in high-needs districts.

Decades of data clearly demonstrate the power of a teacher's impact on student learning. A strong teacher helps students—even previously low-achieving students—soar, while a succession of weak teachers can do damage from which students never recover.

Consider two examples:

- Students in Los Angeles who were assigned a top-quartile teacher increased their math achievement scores on average 10 percentile points more than students who had a teacher in the bottom quartile. With a top-quartile teacher four years in a row, low-income students could, effectively, overcome the achievement gap.¹

¹ Gordon, Kaine and Staiger, "Identifying Effective Teachers Using Performance on the Job" (The Brookings Institute 2006).

- Students who start the third grade at about the same level of reading achievement (near the 60th percentile) finish sixth grade approximately 35 percentiles apart, with those assigned to three effective teachers completing sixth grade at about the 75th percentile and those assigned to three ineffective teachers finishing sixth grade at about the 40th percentile.²

Simply ensuring that our most vulnerable students are matched with our most able teachers would—according to some studies—close the achievement gap. But instead of providing these students what they most need, we too often do the opposite.

Low-income and minority students in **Tennessee** are taught at much higher rates by the “least effective” teachers than are their more privileged peers. Specifically, in Tennessee’s high-poverty and high-minority schools 23.8 percent of staff members ranked as “least effective” while only 16 percent of staff at low-poverty and low-minority schools fell into that category.³ Conversely, only 17.6 percent of teachers at high-poverty and high-minority schools in Tennessee ranked “most effective” compared to 21.3 percent at low-poverty and low-minority schools. This differential treatment shows in achievement scores. Tennessee’s most recent National Assessment of Educational Progress (NAEP) scores indicate that low-income and African-American eighth-graders scored in the 13th and 10th percentiles, respectively, in mathematics while their more affluent and white peers scored in the 35th and 30th percentiles, respectively.

While teacher-effectiveness data is not available statewide in **Texas** there is clear evidence that low-income students and minority students are being shortchanged on teacher talent in the Lone Star State. For example, research demonstrates a strong link, particularly in mathematics, between teachers’ subject-area knowledge and student achievement. Hispanic, African-American and low-income students in Texas are more likely than their more affluent and white peers to be taught by out-of-field teachers, who have neither a college major nor minor in the subject they are teaching. Nearly 30 percent of Algebra I teachers in Texas schools serving the most low-income students lack certification in math, which is almost twice as many out-of-field teachers as in schools with the most affluent students. In schools with the highest concentration of African-American students, 42 percent of Algebra I teachers lack certification in math compared to 18 percent of teachers in the schools with the fewest African-American students.⁴ Again, this disparity is reflected in student achievement. Low-income and African-American eighth-grade students scored in the 23rd and 17th percentiles, respectively, on the most recent NAEP math assessment while their more affluent and white peers scored in the 51st and 54th percentiles, respectively.

As currently designed, the Noyce program recognizes and addresses the need for more quality teachers in high-minority and high-poverty schools. If the program is revised to make teaching

² Jordan, Mendro and Weerasinghe, “The Effects of Teachers on Longitudinal Student Achievement” (2007).

³ Tennessee Department of Education 2007. “Tennessee’s Most Effective Teachers: Are they assigned to the schools that need them most?” available at http://tennessee.gov/education/nclb/doc/TeacherEffectiveness2007_03.pdf.

⁴ Analysis of 2006-2007 Teacher Employment Records from the Public Education Information Management Systems by Ed Fuller, Ph.D., University of Texas at Austin.

in a high-needs district voluntary the scholarships will become a much weaker tool toward equity—at a time when we need more and stronger equity tools. Without the Noyce program's requirement, a large, reliable stream of quality math and science teachers for high-poverty and high-minority schools will dry up.

The decision to retreat from targeting in the Noyce program is particularly confusing in light of the Department of Education's strong move toward better targeting. In both its FY 2011 budget request and its *Blueprint for Reform of ESEA*, the Department revamps many of its programs, like the Teacher Incentive Fund, and many of its proposed reforms to better target high-needs schools and districts. NSF should follow the Department's lead and keep the Noyce program focused on high-needs districts.

I would be happy to speak with you further about anything in this letter. Please feel free to contact me at (202) 293-1217 ext. 312.

Sincerely,



Amy Wilkins

Vice President for Government Affairs and Communications

cc: Congressman Daniel Lipinski, Chairman, Sub-committee on Research and Science Education
Congressman Vernon J. Ehlers, Ranking Member, Sub-committee on Research and Science Education