

PREPARED REMARKS
for
ASSISTANT SECRETARY OF EDUCATION HENRY JOHNSON
before the
SENATE SUBCOMMITTEE ON EDUCATION
AND EARLY CHILDHOOD DEVELOPMENT
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Good morning, Mr. Chairman and Members of the Subcommittee. Thank you for this opportunity to testify about President Bush's efforts to improve math and science education through his American Competitiveness Initiative. Teaching and learning essential concepts of mathematics and the sciences are a critical part of a high-quality education. They help open the door to postsecondary education—especially for our poor and minority students—and help to ensure that our future workforce has the skills needed to benefit from the increased competitiveness of the global economy of the 21st century. For all of these reasons, I appreciate the efforts of this Subcommittee to bring attention to the need to improve instruction in math and science in our elementary and secondary schools.

I know you have already heard from Secretary Spellings and Assistant Secretary Tom Luce, so I will do my best to take a little different perspective and focus on our K-12 students, where they are now in terms of math and science achievement, where we need to go, and how we can get there.

SOLID PROGRESS IN THE EARLY GRADES

I want to begin by pointing out that in some ways, this new emphasis on math and science education is surprising. After all, we have solid evidence that the math achievement of younger American students has been improving steadily for the past 15 years. For example, the percentage of 4th-graders performing at or above the Basic level on the National Assessment of Educational Progress (NAEP) rose from 50 percent to 80 percent from 1990 to 2005. Over the same period, the percentage of 4th-graders performing at or above the Proficient level almost tripled, from 13 percent to 36 percent.

The story is similar, though not quite as impressive, for 8th-grade scores on the NAEP. The percentage of 8th-graders scoring at or above the Basic level climbed from 52 percent in 1990 to 69 percent in 2005, while the percentage of 8th graders at or above the Proficient level doubled from 15 percent to 30 percent.

These numbers sound pretty good, and we have not been shy about highlighting this progress as evidence that the standards-based accountability required by the No Child Left Behind Act is working to improve our nation's educational performance.

BUT TOO MANY STUDENTS HIT THE WALL IN MIDDLE AND HIGH SCHOOL

Unfortunately, we also have strong evidence that we are not getting the job done in the higher grades, in late middle school and particularly at the high school level. I know that many

of you are familiar with this data, so I will mention just two examples. First, the Long-Term Trend NAEP results show that the performance of 17-year-olds on “moderately complex mathematical procedures and reasoning” did not change from 1999 to 2004. Second, this underperformance has widened the gap in mathematics achievement between US students and those of other countries. According to the 2003 Program for International Student Assessment, American students ranked 24th out of 29 members of the Organization for Economic Cooperation and Development in mathematics literacy and problem solving.

Data suggests that low achievement in high school math starts when students do not obtain the skills necessary to take and pass algebra. In 2004, for example, 82 percent of middle- and high-school students in California tested below the proficient level in Algebra I on the California Standardized Test. These results are particularly alarming in light of longitudinal studies conducted by the Department showing that Algebra is a critical “gateway” course on the path to postsecondary education.

THE AMERICAN COMPETITIVENESS INITIATIVE

President Bush looked at this data and reached the same conclusion as this Subcommittee: the time for action is now. This is why his 2007 budget proposed an American Competitiveness Initiative (ACI) that includes several proposals designed to significantly improve mathematics and science education in grades K-12.

The ACI would fund several complementary activities intended to (1) strengthen math instruction beginning in the earliest grades to ensure that all students are ready for Algebra in middle school, (2) provide extra support to middle school students who are below grade level in math achievement, and (3) increase the availability of challenging, college-level math and science courses to high school students through Advanced Placement and International Baccalaureate programs. In addition, the ACI would support a wide range of locally determined high school reforms aimed at ensuring that every student not only graduates from high school, but graduates with the skills necessary to succeed in either college or the workforce.

To kick off this effort, Secretary Spellings will move quickly this year to create a National Mathematics Panel, which will work to identify essential mathematics content and effective instructional methods. This Panel, modeled after the success of the National Reading Panel in identifying the research-based reading instruction that informed President Bush's Reading First initiative, will lay the groundwork for establishing a solid research base of math instruction to guide reforms at the Federal, State, and local levels. The Department is proposing to spend \$10 million in fiscal year 2007 to begin implementing the Panel's recommendations for improving math instruction in our K-12 classrooms.

The Panel's recommendations also would guide implementation of the President's Math Now for Elementary School Students initiative, which would provide \$125 million in competitive grants to partnerships promoting instructional principles and promising practices aimed at ensuring that all students in grades K-6 master the algebraic concepts that they will need to take and pass Algebra in middle school.

Grantees would target their efforts to elementary or middle schools with significant numbers of students who are at risk of not meeting adequate yearly progress requirements in mathematics under the Title I program. Funds could be used for professional development in mathematics instruction, the adoption of research-based instruction and promising practices, and enhanced assessments designed to pinpoint where students need help. In particular, these activities would provide significant resources to ensure that teachers with sufficient content knowledge teach students who need the most help.

We also are asking for \$125 million for a companion proposal, Math Now for Middle School Students, designed to throw a lifeline to middle school students who are below grade level in mathematics. This program would award competitive grants to partnerships serving one or more middle schools for activities such as diagnosing the deficiencies of students who tested below the proficient level on State math assessments, implementing research-based interventions involving intensive and systematic instruction, continuous progress monitoring, and professional development.

In addition to Math Now, the ACI includes new incentives to encourage qualified math and science teachers to work in high-poverty schools. The proposed Adjunct Teacher Corps would use \$25 million to promote arrangements under which experienced professionals with subject-matter expertise, particularly in math and science, would teach in secondary schools. Such arrangements could include part-time instruction, teaching while on leave from their regular jobs, or providing instruction online.

EXPANDING ADVANCED PLACEMENT

Another highlight of the American Competitiveness Initiative that I want to briefly mention is a \$90 million expansion of the Department's Advanced Placement program. This proposal, which is consistent with a key provision in the PACE-Education Act, would train up to 70,000 teachers over the next five years to teach math, science, and critical foreign languages in AP and International Baccalaureate programs.

We believe that the Advanced Placement program offers a proven, scalable approach to raising expectations and increasing rigor in America's high schools, particularly those with high concentrations of low-income students that typically do not offer such curricula.

HIGH SCHOOL REFORM

Another piece of the 2007 Education Agenda, consistent with the goals of ACI, is the President's High School Reform proposal, which would provide \$1.5 billion to support a wide range of locally determined interventions aimed at ensuring that a high school diploma becomes a ticket to success for all graduates, whether they enter the workforce or go on to higher education. This proposal also would require States to assess students in reading or language arts and math, at two additional grades in high school. NCLB currently requires assessments in these subjects for just one high school grade. These additional assessments would help increase accountability at the high school level and, in particular, would help teachers and principals target interventions to those students at greatest risk of not meeting challenging State academic

standards and not completing high school. This is critical for reducing the roughly 1 million high school students who drop out each year, at great cost to our economy and society.

ACI BUILDS ON EXISTING PROGRAMS

The President's American Competitiveness Initiative proposes innovative, cost-effective ways to improve math and science instruction in America's public schools that would build on earlier efforts in this area by Congress and the Administration. For example, for fiscal year 2006, Congress provided first-time funding of \$99 million for the Teacher Incentive Fund, a program proposed by President Bush to provide financial incentives to help improve achievement in our highest-poverty schools, including achievement in math and science. And Congress recently made permanent the loan forgiveness provisions of the Higher Education Act, which help bring more individuals with math and science backgrounds into the teaching profession by offering up to \$17,500 in loan forgiveness for highly qualified math and science teachers serving low-income communities.

The Department also administers the Mathematics and Science Partnerships program, which provides State formula grants to help States and localities improve student academic achievement in mathematics and science. The program promotes strong teaching skills for elementary and secondary school teachers, including integrating teaching methods based on scientifically based research and technology into the curriculum.

And in a broader sense, as you heard yesterday from Assistant Secretary Luce, the entire No Child Left Behind enterprise, with its emphasis on assessments, accountability for results, school improvement under Title I, and ensuring that all teachers are highly qualified in the subjects they teach, provides a strong push to State and local efforts to improve achievement in the core curricula, including math and science.

CONCLUSION

In conclusion, I believe the President's American Competitiveness Initiative, along with the PACE-Education Act, sends an important message to the American people, and especially to parents. No Child Left Behind reforms are taking hold and student achievement is rising, but we need to raise the bar again if we are to prepare our children for the jobs of the 21st century and benefit from increased global competitiveness. The ACI will help us reach that goal, and I urge the Members of this Subcommittee to give the President's proposal careful consideration as you move forward in your efforts to improve math and science education in grades K-12.

Thank you, and I will be happy to answer any questions.