

AN EDITORIAL: What are we waiting for?

I raised this question in an editorial expressing impatience about adopting sustainable lifestyle practices in our Spring 1993 issue. Now I raise it with regard to a much more tractable issue: the seemingly elusive goal of improving the learning of science by Americans.

The front page of our Fall 2005 issue ran two side-by-side stories, one about the many calls for improved science learning that had crossed our desk the preceding two decades, the other about the hopes that "Rising Above the Gathering Storm" (now known by the acronym RAGS) would finally bring some action – after all, Congress had commissioned it. Our Winter/Spring 2006 issue ran a follow-up story listing proposed legislation to implement the recommendations of RAGS (compiled by the Triangle Coalition) but noting that the President's 31 January 2006 State of the Union address had called only for the provision to train 70,000 AP and IB science and math teachers. News from the Triangle Coalition in our Fall 2006 issue cites introduction of a broad range of bills to "strengthen U.S. economic competitiveness by improving math and science education and research," (in May 2006), and the *Triangle Coalition Electronic Bulletin* for 5 October 2006 reports that the National Competitiveness Investment Act was introduced into the Senate. But the NSTA Legislative Update of 2 October 2006 notes that "The Senate did not vote on this bill before they adjourned." Meanwhile, the Department of Education made good on the proposal to train additional AP and IB science and math teachers: on 8 September 2006 Secretary of Education Margaret Spellings announced \$17 million in grants "to boost participation of low-income students in advanced placement courses and tests."

With fiscal year 2007 swept away by continuing resolutions that don't allow for innovations, we now come to fiscal year 2008. The 12 February 2007 American Institute of Physics report on "Science Education in the FY 2008 Budget Request" shows "\$90 million to expand the training of teachers to teach, and opportunities for students to take, Advanced Placement and International Baccalaureate course in science, math, and critical foreign languages" -- alone of all the RAGS proposals (the same as in the 2006 State of the Union address). In addition, Rep. Vernon Ehlers (R-MI), one of two physicists in Congress, is reported in the 8 January 2007 NSTA Legislative Update to have introduced four math and science education bills (H.R. 35, 36, 37, 38), which, as reported in this issue, Arthur Bienenstock (president-elect of the American Physical Society) complained to pale in their provisions in comparison with the recommendations of RAGS. But the 29 January 2007 NSTA Legislative Update reports that Rep. Bart Gordon (D-TN), now chair of the House Committee on Science and Technology, "re-introduced several pieces of legislation he authored in the 109th Congress. The 10,000 Teachers, 10 Million Minds Science and Math Scholarship Act (H.R. 362) implements most of the K-12 science education recommendations of the National Academy of Sciences (NAS) report, *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future*."

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But while we might be hopeful for more Congressional action this year, there are also suggestions that "money isn't everything." The report in this issue on the newly-cast BSCS peer-reviewed journal, *The Natural Selection*, presents the claim of Eric Hanushek that tripling resources for science education over the past 40 years has left test scores stagnant. Indeed, this is happening as the achievements of the NSF Urban Systemic Program are heralded in Resource #2 of this issue. On the other hand, the report from the 1 February 2007 issue of the *Triangle Coalition Electronic Bulletin* states that schools participating in NSF's Math Science Partnerships (MSPs) are showing improved math and science proficiency, although the means for measuring this are not specified. If the improved proficiency would translate to higher TIMSS scores, and financial resources alone are not improving them, then it would be interesting to find what aspect of the MSPs is bringing about the improvement.

Yet, while the recommendations of RAGS still go unattended to, the January 2007 issue of *NSTA Reports* contains news of yet *another* call to action, this from the "new Commission on the Skills of the American Workforce, a bipartisan group that in 1990 produced the influential report *America's Choice: High Schools or Low Wages*." The title of their new report is *Tough Choices or Tough Times*.

Have we fallen into a trap of thinking that all we need to do is issue reports calling for improvement? A colleague who is better internationally connected than I tells me that South Korea makes a "big deal" about the TIMSS tests, creating a festive atmosphere that exhorts its students to do well. On the other hand, American students taking the test are told that they "don't count," and my colleague justifiably wonders whether this causes American students to take the test less seriously and possibly not do as well as they were fully able.

- John L. Roeder