

AP Test Results Offer Hope for STEM Ed in U.S.

Recently-released AP scores show the U.S. might be improving in STEM subjects

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At last. Some good news in math and science education.

For the past few years, there has been well-justified angst about the alarming decline in math and science achievement in the United States. International rankings by the Organization for Education and Cultural Development placed the United States at 17th in math and 25th in science. That was humiliating and alarming.

Now there are encouraging signs of progress. The College Board results for Advanced Placement exams for 2010-2011 are being released and they show significant gains--especially in the schools selected three years ago to implement the AP support program sponsored by the National Math and Science Initiative, or NMSI.

Results for those NMSI schools show passing scores on AP math, science, and English exams have been raised 124 percent. That's nearly six times the national average. The results for minority students and female students are even more encouraging. The AP passing scores for African American and Hispanic students on AP math, science, and English exams increased 216 percent. The female increase on AP math and science exams was 144 percent.

These positive results show there is a new generation of young people gaining needed skills in math and science. Getting more students with math and science skills into the jobs pipeline is a critical step toward recovery--60 percent of the new jobs that will open in the 21st century will require skills currently possessed by only 20 percent of our workforce, according to the National Commission on Mathematics and Science for the Twenty-first Century.

Why will Advanced Placement classes help fill that gap? Students who pass an AP course are three times as likely to complete college. This is especially important at a time when the United States has dropped to 20th in high school graduation rates and 16th in college graduation. Today's jobs require more knowledge than a high school education.

Other nations are racing ahead to establish dominance in science, technology, engineering, and math (STEM) fields:

- Russia is building an "innovation city" in the suburbs of Moscow that it hopes will challenge Silicon Valley. It will host five scientific communities next to the Skolkovo Moscow School of Management, a top-level business school founded by leading Russian and international companies.

- Saudi Arabia just opened King Abdullah University of Science and Technology with a \$10 billion endowment already in hand.
- China is creating new technology universities by the dozens and has replaced the United States as the world's high-technology exporter.
- Singapore has invested more than a billion dollars to make that country a medical science hub and attract the world's best talent. A new university is opening this year to focus on sustainable architecture, product engineering, and information engineering.
- In Malaysia, a jungle was cleared for a computer city called "Cyberjaya" that includes institutions of higher learning and has drawn investments from 500 companies, including Dell, Hewlett Packard, Ericsson, Motorola, BMW, IBM, Shell IT, Monster.com, and the Response Centre of the Anti-Money Laundering Network.
- India, which has the third-largest higher education system in the world, next only to China and the United States, recently announced it will build 14 new comprehensive universities of "world-class" stature.
- France has subsidized the creation of "Sophia Antipolis," a high-tech park near Nice. It houses companies in computing, electronics, pharmacology, and biotechnology, along with several institutions of higher learning and the European headquarters of the World Wide Web Consortium, the international standards organization.

Whatever their current economic problems, these nations and many others have rightly concluded that the way to win the world economic competition in the future is by doing a better job of educating and innovating.

The challenge for the United States is to make sure our students keep up with the times. The new College Board results show we can do better. More than 50,000 students are tackling college-level work this fall thanks to NMSI support. What's needed is the national will to bring that same success to more schools and more students. We can't afford to wait and just hope our students will catch up.