

NEWS RELEASE

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FOR IMMEDIATE RELEASE

Monday, February 19, 2007

Mathematics and Science Called the Keys to Success in Today's World

Statewide advisory group calls for action to support Ohio's economic growth

COLUMBUS, OH — To attract and retain 21st century businesses, and to create and sustain high-skill, high-wage jobs, Ohio must produce more workers with advanced knowledge and skills in science, technology, engineering and mathematics, says a report presented today to the Ohio Board of Regents, Ohio Department of Education and Governor Ted Strickland's Office by a statewide advisory group.

The Science and Mathematics Education Policy Advisory Council's report, *Science and Mathematics: A Formula for 21st Century Success*, calls for bold action that will support economic growth, strengthen the system of mathematics and science education, build upon existing programs and make high-level mathematics and science courses available to all Ohio students.

"Not meeting Ohio's talent challenge will have devastating consequences for Ohio's economy, just as it will limit Ohioans' opportunities in a fiercely competitive, global economy," said **Karen A. Holbrook**, president of The Ohio State University and co-chair of advisory council.

According to Holbrook, Ohio has made substantial progress in preparing its students to succeed in the 21st century economy, but there are growing indications that the gap between workplace readiness and employers' expectations for entry-level workers is widening. Holbrook added: "A strong foundation in mathematics and science is vital for maintaining and enhancing the innovation and creativity on which our economy was built."

Citing *New York Times* columnist Thomas Friedman's assertion that "math and science are the keys to innovation and power in today's world," **Julian M. Earls**, retired director of the NASA Glenn Research Center in Cleveland and co-chair of the advisory group, acknowledged that it will not be easy to dramatically increase the number of students who acquire greater thinking, reasoning and problem-solving skills in these disciplines.

"In part, the difficulty of this task is because of Ohioans' anxiety about mathematics and science, as well as their lack of appreciation for these subjects as ways of thinking," Earls said. "But it's also because, for a long time, Ohioans have been satisfied to educate a relatively small percentage of students very well, while a much larger population receives an education that is, simply stated, 'good enough.'"

(MORE)

Earls, now an Executive in Residence at the Nance College of Business Administration at Cleveland State University, said: "Today this kind of thinking is risky if not dangerous. Good enough is no longer good enough."

This is why the Ohio Board of Regents, Ohio Department of Education and Governor's Office created the Science and Mathematics Education Policy Advisory Council (SAMEPAC) in November 2005, directing it to make policy recommendations on improvements in the state's P-16 education system.

Commenting on behalf of interim chancellor Garry Walters, Governor Ted Strickland and state superintendent Susan Tave Zelman, *Stan Heffner*, associate superintendent for curriculum and assessment, said: "The Advisory Council was asked to search for breakthrough answers and to provide a blueprint that will enable us to act boldly. SAMEPAC has responded admirably and its recommendations will guide us as Ohio's education policy leaders all move forward to strengthen the state's technological expertise."

SAMEPAC's 13 recommendations point to five strategies for enhancing Ohio's success in the 21st century economy:

1. SAMEPAC calls for actions – including a multi-year, research-based public awareness campaign – that expand Ohioans' awareness and understanding of the importance of mathematics and science to their success in the 21st century workplace and to the state's future economic prosperity.
2. SAMEPAC calls for a series of actions – including the creation of special-focus STEM schools and the elimination of financial and other barriers that discourage college-level students from taking and successfully completing STEM courses – to increase the number of students who master high-level mathematics and science subjects and pursue STEM careers.
3. SAMEPAC calls for changes in the ways that mathematics and science teachers are recruited, prepared, retained and developed throughout their careers to ensure that every Ohio student has teachers who know their subjects and how to teach them, as well as teachers who care about their students and are committed to their success.
4. SAMEPAC calls for building partnerships that allow postsecondary instructional and research programs and the business sector to join in collaborative efforts to improve students' STEM-career opportunities, and to improve the education community's ability to meet the workforce needs of Ohio's technology- and innovation-driven businesses.
5. While acknowledging that local action will be required to ensure that all students have opportunities to acquire the high-level mathematics and science knowledge and skills that are the gateway to success in the classroom and careers, SAMEPAC calls for changes – including the creation of the Institute for Mathematics and Science Education – that will enhance the state's capacity to drive improvement in mathematics and science learning, and to fuel economic growth.

SAMEPAC consists of 23 Ohioans from all regions of the state, representing a variety of professions, disciplines and points of view. Its members are educators (including teacher educators), leaders of business and industry, entrepreneurs, engineers, public officials and parents.

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NOTE: Attached is an executive summary of the SAMEPAC report, which provides a full listing of the advisory group's 13 recommendations.

The final report and executive summary are available at www.regents.ohio.gov/samepac

