

# EDUCATION WEEK

VOL. 25, NO. 28 | MARCH 22, 2006 | American Education's Newspaper of Record | © 2006 Editorial Projects in Education | \$3

## COMMENTARY

# China's Modernization Plan

## *What U.S. Education Leaders Can Learn*

By Vivien Stewart

**T**he rise of China is one of the central facts of modern life. China's impressive economic performance over the past 20 years has been widely reported. Far less known are the great strides it has made in education in a relatively short period of time—in eliminating illiteracy, providing nine years of basic education, and dramatically expanding the numbers of students in higher education. Chinese education leaders are focused, determined, and organized to improve education—to raise their people out of poverty and prepare a highly skilled population to compete in the world economy.

Over the past three years, the Asia Society has taken delegations of U.S. education leaders to China and hosted Chinese leaders in the United States for discussions with their American counterparts. What are some of the lessons learned about China's educational growth, and what are their implications for the next phase of U.S. education reform?

*China has a bold, long-term vision for education and the structures to meet it.*

Through investment in education, China hopes to make the transition from being a heavily agricultural and low-wage-manufacturing economy to becoming a world leader in a wide range of fields. Its long-term goals include: a world-class education for the top 5 percent to 10 percent of high school students; universal 12-year education by 2020; universal preschool education by 2015; 100 first-class universities and 30 world-class research universities; science parks to develop products from university research; and a modernized curriculum aimed at developing students' creativity and ability to apply their knowledge, their skills in technology use, and proficiency in English.

This commitment and focus is accompanied by aligned systems to carry out these goals. Despite considerable decentralization to provinces and municipalities, China is a highly organized society. Any change in policy is immediately disseminated through many means, including a national television network for teachers, model lesson plans and materials, and weekly professional-development meetings held among teachers at every school.

*China provides a world-class education to its top high school students.*

Currently, only 40 percent of Chinese students go to upper-secondary schools, that is, attend



school beyond the nine years of compulsory education. Highly competitive entrance examinations govern the system of high schools, at the head of which are “key” high schools. These top schools, many of which are partial boarding schools, offer a rigorous academic curriculum that includes high standards in math and science, proficiency in English, independent research projects, and extensive after-school activities in art, music, sports, and entrepreneurship. Key schools have a clear academic purpose, and everything is directed toward that end.

*China has an intensive focus on math and science education.*

Like most East Asian countries, China emphasizes mathematics and science far more than the United States does. China has the following: clear national standards and textbooks that focus on mastery of a few fundamental concepts; strong subject-matter preparation and professional development for teachers; use of specialized math and science teachers as early as the 1st grade; and a strong (some say excessive) societal emphasis on math and science, including in the university entrance examination. As a result, Chinese students, girls and boys alike, do well in math and science.

*China's schools are more internationally oriented than American schools.*

Perhaps surprisingly, given China's isolation from the world after 1949, and especially during the Cultural Revolution, Chinese schools are today more internationally oriented than American schools. For example, in 2001, Chinese leaders decided to require English as a second language, beginning in 3rd grade. To date, 110 million students are learning English in primary and secondary schools. Chinese schools also teach world history and geography, actively pursue sister-school relationships with schools in other countries, and encourage university students to study abroad.

*Chinese education leaders use international benchmarking to improve their system.*

The syndrome of rejecting any ideas “not invented here” is not an issue in Chinese education. From the expansion of early-childhood education to the creation of world-class universities, Chinese leaders study effective approaches in other countries and benchmark their own models against the best in the world. Recent major curriculum reforms are attempting to move away from China's traditional didactic teaching practices, with their heavy emphasis on memorization, to more Western approaches that incorporate inquiry methods, classroom discussion, application of knowledge, and use of technology.

*China has a coherent teacher-development system.*

Teaching is an honored profession in China. Future teachers have strong subject-matter preparation and are immersed in observations of experienced teachers. Once teachers are hired, they enter a system of continuous professional development in schools by master teachers. A career ladder provides salary incentives based on demanding standards. There are trade-offs to these practices: Class sizes are large, ranging from 40 students

in primary grades to 60 to 70 in senior high schools.

*China has a strong cultural commitment to education.*

Respect for education is deeply ingrained in Chinese history and culture. The school year is 190 teaching days for primary school and 200 teaching days for secondary school, compared with 180 days in most of the United States. But this understates the difference in the level of commitment by Chinese students compared with their U.S. peers. Students in China work twice as many hours as their American peers—to honor their families and to participate in the expanding opportunities that are open to those with a good education. Effort, not ability, is presumed to determine success in school.

**E**ducational developments in China are impressive. But as China seeks to turn its enormous population from a burden into an asset, it faces huge challenges. Among these are:

**The Rural-Urban Education Gap.** There are, in fact, two Chinas: one urban, and one rural. More than half of China's population is

engaged in agriculture, and more than 70 percent of its rural population lives on less than \$2 a day. While the top tier of China's school system is a productive, exam-oriented meritocracy, rural schools that serve 800 million people lag behind in teacher

qualifications, facilities, student achievement, and access to upper-secondary and higher education.

This rural-urban income and education gap, and the massive migration to cities it is inducing, is undoubtedly the biggest challenge to China's peaceful growth. The government is beginning to address the problem, with additional resources for rural education, including salary and career incentives for teachers to work in rural areas, and the creation of a vast technology-based system of distance learning.

**The Examination Funnel.** Like many countries in which opportunities for higher education are limited, China has a school system heavily focused on selecting the most talented students to go on to the next stage. The university entrance examinations, in particular, are critically important. Both Chinese and American critics charge that the examination-driven system places undue emphasis on response speed and memorization of obscure facts, and does not produce the kind of students who can apply their knowledge in a rapidly changing economy. This high-stakes system also diminishes the importance of subjects that are not tested. A major curriculum reform has been introduced to address these issues, but it is running into stiff resistance.

**Capacity Issues.** As China seeks to rapidly expand and modernize its education system, there are enormous capacity issues at every level. For example, it has a significant shortage of the teachers needed to carry out the mandate to teach English. Also, most Chinese teachers are unfamiliar with the less didactic and more inquiry-oriented approaches being introduced in the new curricu-

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lum. This, combined with the entrenched university examination system, is producing considerable resistance to curriculum reforms.

At the university level, China produces large numbers of engineers, but their training often lacks modern equipment and practice in applications. A private sector is rapidly emerging at both the secondary and higher education levels, but does not yet have effective quality-control mechanisms.

For much of the 20th century, the United States led the world in high school and higher education participation. Now other countries, including China, are making significant investments and fundamental reforms to prepare their students to be successful in the knowledge-intensive, high-tech global economy. China's remarkable education growth and future plans demand a serious reassessment of the American education agenda. U.S. leaders should do the following:

- Make learning about China and other world regions a top priority. Business, political, and education leaders at state and national levels urgently need to stimulate a national discussion of the knowledge and skills American students will need to *compete* and *cooperate* in the globalized world of the 21st century.

- Target the U.S. math-science achievement gap and get more students to succeed in a truly world-class curriculum in these vital subjects.

- Redesign high schools for the global age, to integrate international knowledge and skills and connections to schools in other countries.

- Expand the study of Chinese, a language we as a nation can no longer ignore, so that 5 percent of high school students are studying Mandarin by 2015.

- Benchmark our education practices against those of other important countries and incorporate this international benchmarking into the development of future education leaders. Chinese and American educators have much to learn from each other, for example, as the Chinese seek to modernize their society and we seek to raise standards in science and math.

In sum, China's example compels U.S. educators to develop our own long-term vision. We urgently need a globally oriented, truly world-standard education to prepare our young people for leadership, work, and citizenship in the interconnected world of this new century.

Vivien Stewart is the vice president for education of the Asia Society, in New York City. This essay is based on a longer report, "Education in China: Lessons for U.S. Educators," available from the society at [www.internationaleled.org](http://www.internationaleled.org).

Reprinted with permission from *Education Week*, Vol. XXV, Issue 28, March 2, 2006, by The Reprint Dept., 800-259-0470

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*Education Week* is published 44 times per year by Editorial Projects in Education Inc. Subscriptions: U.S.: \$79.94 for 44 issues.  
Subscriptions: Canada: \$135.94 for 44 issues.