



Global Awareness and Education: America's Test for the 21st Century

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Global Awareness and Education: America's Test for the 21st Century

"We must re-define, as each generation has done, what it means to be an educated American in a changing world. The educated American of the 21st century will need to be conversant with at least one language in addition to his or her native language, and knowledgeable about other countries, other cultures, and the international dimensions of issues critical to the lives of all Americans."

"Education for Global Leadership,"
The Committee for Economic Development, 2006

The World Has Changed and Education Should Keep Pace

Just a few years into the 21st century, the world already seems a very different place. U.S. and global populations are growing—and growing increasingly diverse, dynamic, and interdependent. Technology and the Internet are permanently blurring—and sometimes seem to be dissolving—geographic, economic, and cultural borders. Global geopolitical tensions and environmental issues are raising the stakes for all nations to live together peacefully and productively.

These realities have a profound implication for all aspects of American society. As the contributor of 20 percent of the world's gross domestic product (GDP), there's little question the U.S. will be a dominant economic and political force for decades to come. But we mustn't let perceived dominance cloud our global perspective. Today, 19 out of every 20 people in the world are not Americans. With developing countries expected to account for 95 percent of the world's population growth over the next two decades, the relative population of the U.S. will continue to shrink.

In this environment, political, social, and commercial dialogue must be more fluent, collaborative, and globally aware. However, as Athens-based journalist Alkman Granitsas wrote, Americans are becoming less—not more—globally engaged. Only 21 percent of Americans own passports and the percentage of Americans traveling internationally has grown at a slower rate than the number of foreign travelers visiting the U.S. Less than 9 percent of American university students study a foreign language today, down from 16 percent in 1965. And coverage of foreign affairs has dropped significantly across U.S. mainstream media in recent decades ("Americans are Tuning Out the World," *YaleGlobal*, Nov. 24, 2005).

“Education is the most powerful weapon which you can use to change the world.”

—Nelson Mandela

Global Awareness Is a Necessity, Not a Luxury, in Business and Government

No country can go it alone in today's global community. The implications of this reality for American education are both profound and permanent. As many education experts, advocates, and policy makers have noted, today's students need to learn not only to collaborate and operate effectively within their own borders, but across borders and cultures. This requires new skills and competencies not commonly taught in U.S. primary and secondary schools.

Nowhere is the need for greater global awareness and experience more evident than in American business. While the U.S. economy continues to grow at an annual pace of about 3 percent, the growth in developing countries is nearly double that number, and U.S. business investment increasingly reflects that trend. In fact, international commerce today accounts for a quarter of the American economy and a third of U.S. economic growth (Foreign Policy Association, 2000).

An obvious challenge facing American companies doing business internationally is having a workforce equipped to effectively translate American business models and offerings to foreign marketplaces. According to a 2002 survey by the Committee for Economic Development, 30 percent of large U.S. businesses believe that a “provincial, monolingual workforce” had cost them global business opportunities.

“Hard” skills like language proficiency are obviously critical to success in the global marketplace, yet according to the Committee for Economic Development, less than one tenth of American college students enroll in foreign language classes and just one percent study abroad. But language skills are just part of the equation. As a recent *Harvard Management Update* notes, American managers also need better complementary skills, including openness to new and different ideas and a belief that differences matter.

Greater global awareness is equally important in government, as state and federal lawmakers work to support a vibrant global economy, maintain strong relationships with American allies, and protect U.S. national interests. This is particularly true as America's global image continues to slip among even our close allies (2006 Pew Global Attitudes Project).

Less than two weeks after September 11, 2001, a report of the House Permanent Select Committee on Intelligence identified language as the single greatest need in the U.S. intelligence community, with more than 80 federal agencies needing staff proficient in nearly 100 foreign languages. Government employees also need greater awareness of cultural differences and better complementary skills to work effectively with allies and adversaries.

Does American Education Prepare Students for Life and Work in the 21st Century?

Studies show that, sadly, American schools are not adequately preparing students for success in today's global community.

Eighty-five percent of 18- to 24-year-old Americans were unable to locate Afghanistan and Iraq on a map in a 2002 National Geographic Society survey, despite the fact the U.S. was at war or publicly preparing for war in both countries. Sixty-nine percent were unable to locate Great Britain and 29 percent were unable to find the Pacific Ocean.

We also lag behind other nations in language proficiency. Only one in three American seventh to twelfth graders study a foreign language. At the elementary school level, that number falls to one in twenty (McGray, “Lost in America,” *Foreign Policy*, May/June 2006).

“The future workforce is here, and it is ill-prepared.”

—Report by Conference Board, Corporate Voices for Working Families, the Partnership for 21st Century Skills, and the Society for Human Resources Management

Equally alarming, we're failing to teach non-European languages. While 90 percent of U.S. secondary schools offer Spanish classes, just 1 percent offer Chinese and even fewer offer Arabic (“Students Taking Spanish, French; Leaders Pushing Chinese, Arabic,” *Education Week*, March 29, 2006). In contrast, students in China begin learning English in the second grade. About a fourth of Australian students now study an Asian language. In Europe, many schools are focusing on tri-lingualism: proficiency in two languages with familiarity of a third.

Ironically, America's lack of global awareness coincides with a home population becoming dramatically more diverse. Immigration is expected to fuel two-thirds of the national population growth between now and 2050. In California today, about one-quarter of the population was born outside the U.S. and more than 300 languages are spoken in its K-12 schools.

In addition, non-white Americans are falling behind locally. Nowhere is this more evident than in education. According to the National Center for Public Policy and Higher Education, the gap between whites and Hispanic/Latinos with a bachelor's degree or higher has nearly doubled in the past 20 years. The gap between whites and African-Americans has grown from 11 percentage points to 15. If these trends continue, per capita personal income in the United States will fall 2 percent between 2000 and 2020, an alarming reversal of the 41 percent growth seen over the prior two decades.

Framework for Change: Schools Need to Change *What They Teach*

“The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn.”

— Alvin Toffler

While recent education initiatives, including the No Child Left Behind Act of 2001, have been instrumental in focusing attention on the critical need to improve education, few schools have taken enough action to prepare our children for the global community. This needs to change.

While continued emphasis on core subjects is essential, schools can increasingly focus on science, technology, engineering, and math (STEM) curriculum while at the same time adding global content, including foreign languages, geography, and culture. Equally important, teachers can infuse the entire curriculum with global content, issues, and ideas. For example, ancient Mesopotamian history can be tied to sectarian violence in war-torn Iraq. Literature classes can compare coming of age themes across world cultures.

However, global content is only part of the equation. The very nature of knowledge has changed in recent decades. While subjects like grammar or geometry remain relatively static over time, issues and trends in technology, science, politics, and economics are in near-constant flux. Proficiency in these subjects requires not only the mastery of content, but the ability, as futurist Alvin Toffler puts it, to “learn, unlearn, and relearn.” It requires critical thinking skills, the ability to use technology to acquire knowledge, and the ability to apply knowledge and concepts across a range of topics and disciplines.

The Partnership for 21st Century Skills, a group of business and education leaders, including Apple, that advocates global education, has developed a framework for what should be included in K-12 curriculum:

- **Core subjects**, defined by the No Child Left Behind Act as English, reading, or language arts; mathematics; science; foreign languages; civics; government; economics; arts; history; and geography
- **21st century content**, which includes content areas typically not taught today but critical to success in a global community. These include global awareness; financial, economic, business, and entrepreneurial literacy; civic literacy; and health and wellness awareness.

- **Learning and thinking skills**, including critical-thinking and problem-solving skills; communications skills; creativity and innovation skills; collaboration skills; contextual learning skills; and information and media literacy skills
- **Information and communications technology (ICT) literacy**, which is the ability to use technology to acquire and develop 21st century content knowledge and skills
- **Life skills**, including leadership; ethics; accountability; adaptability; personal productivity; personal responsibility; people skills; self-direction; and social responsibility

Framework for Change: Schools Need to Change *How* They Teach

“We must prepare young people for a brain-centered economy whose one constant is rapid change. The predominant classroom model of a single teacher lecturing to 20, 30, or even more students reflects the production-line model of the Industrial Age, not the technological demands of our Information Age.”

—Arizona Governor
Janet Napolitano

Raising global awareness and successfully teaching a 21st century curriculum requires a dramatic change in *how* we teach. Schools should evolve teaching practices to reflect how students actually learn.

Today's students are digitally savvy, born at a time in which cell phones, handheld gaming devices, PDAs, and notebook computers are commonplace and homes are filled with computers, TVs, digital video recorders, and game consoles. And while no generation of students has been enamored of teacher-dominated, lecture modes of teaching, today's students are even less tolerant of it, preferring to learn by creating and doing, not by sitting and listening. They want an active learning experience to match their active lifestyles—preferably enabled by technology.

While technology-enabled learning is what students want and need, each school is at a different point in its ability to bring technology, content, and training into its teaching process, either because of resources or readiness. Some schools have technology tools in a lab and are not ready to go further, but want to maximize their use of the lab for student achievement. Others are putting mobile labs (carts with notebook computers and other equipment) into classrooms, training teachers and making technology a regular part of the coursework and the learning experience.

Still others are finding ways to use innovative new technology such as iPod with or in place of computers to encourage mobile learning and to provide a medium for audio/visual learners. There are even schools that have taken the bold step of instituting a 1 to 1 learning program, which gives each student 24/7 access to learning content through a notebook computer.

Integrating technology into teaching and learning is a critical component of preparing students for success in the 21st century, regardless of the subject matter being taught. When schools fit learning into the mobile and media rich learning styles and lifestyles of 21st century learners—and when students are able to use the digital learning skills they already have—students are more engaged. And when students are more engaged, they acquire new skills and improve academic performance.

Equipping students with new skills will require more of teachers, many of whom were educated in the pre-Internet era. Consequently, school districts, government, and business must collaborate to provide teachers with professional development focused both on international curriculum and on digital media and technology used in 21st century learning. Teacher education programs at the college and university level should also be expanded to address 21st century learning needs, including global awareness. Finally, teachers themselves need to challenge themselves to think—and teach—from a global perspective.

The Apple Distinguished Educators program presents such a global perspective and is a model for collaboration between business and education. Through this program, more than 600 educators from the U.S., Canada, Europe, Australia, New Zealand, Japan, Latin America, and Asia work together to use digital tools to bring global awareness and experience into the classroom. The educators also act as mentors to influence other educators and administrators by presenting their successes at key conferences and events, leading hands-on workshops and getting actively involved at the local, national, and international levels.

Framework for Change: Evolving Measurements of Success

As American school curriculum evolves to better prepare students for the global community, U.S. educators should accordingly evolve testing practices. As the Partnership for 21st Century Skills, notes, current measurement standards, which focus on mastery of content, do not measure more qualitative 21st century skills, such as a student's ability to apply knowledge in complex situations.

The lack of new systems of measurement poses several risks, the most obvious of which is the inability to monitor students' progress in learning the skills they will need to succeed in the global community. In addition, it's important to note that what's tested strongly influences what is stressed in the classroom. In California, for example, global themes represented ten percent of the standards used by tenth grade world history teachers, yet only one question of a sixty-question state examination. Because teachers want students to be fully prepared for state examinations, they may be less likely to stress the global themes presented in the standards.

Another risk is that when teachers are occupied with preparing their students to pass mandated standardized tests, they are less likely to use other forms of in-classroom assessment that are a better gauge of whether students are learning 21st century skills. So even though we need to address the larger issue of current mandated measurement standards, we should also validate other methods of assessment in our classrooms.

For example, an assignment asking groups of students to demonstrate their understanding of a piece of literature by preparing a multimedia presentation requires that they understand the essential elements of setting, character, plot, and theme. But an assessment method also should take into account students' ability to visualize a story, create project assets such as storyboards, work collaboratively, and produce a final product that audiences enjoy and learn from—achievements that cannot be effectively measured through standardized tests.

Parents Play a Key Role

Parents can play a key role in raising the global awareness of American children and promoting other 21st century skills. In addition to asking that their schools and lawmakers emphasize global curriculum in secondary schools, parents have many opportunities to bring global issues and ideas into their homes. Much can be taught without leaving the home or community by tapping into readily accessible tools like online resources to provide perspective on world or cultural events.

For example, websites like <http://www.100people.org>, created by the 100 People Foundation, offer a compelling video and other educational tools that enable parents to illustrate the diversity of the world for their children. In addition, parents can encourage a young New York Yankees fan to similarly follow Tokyo's Yomiuri Giants, Japan's most popular baseball team. Music lessons can be enriched by listening to world music, whether it's African drumming, Celtic fiddles, or Cuban jazz, online or on CDs borrowed from a local library. News stories reporting nuclear weapons testing in North Korea can be used as the impetus to view maps online and discuss the country's proximity to South Korea, China, and Japan.

“We must be the change we wish to see.”

—Gandhi

Government Has a Role: Leading the Change

Local, state, and federal governments need to play an active role in promoting, charting, and leading changes in education. No Child Left Behind represents a solid start, but much more is needed.

America has a long tradition of innovation and excellence in secondary education. Indeed, the U.S. pioneered the practice of public education in the late 18th and early 19th centuries as a way to unite its diverse population and help shape a national culture. Our education system also has proved its ability to refocus in the face of global challenge, passing the National Defense Education Act in 1958 following the Soviet launch of Sputnik to dramatically increase funding for math, foreign language, and science education.

A similar national commitment is needed today. At a minimum, we need bold, properly funded federal initiatives to encourage and provide incentives for state and local school districts to increase students' knowledge of other countries and cultures and offer foreign language study—especially critical, less commonly taught languages—at all levels.

One promising development is the National Security Language Initiative of 2005, which expanded funding for the study of critical languages, including Arabic, Chinese, Russian, Japanese, Korean, Hindi, and Persian/Farsi.

Another is the Abraham Lincoln Study Abroad Act of 2006, which seeks to establish study abroad as an integral part of post-secondary education in America and to increase the number of students studying abroad to 1 million annually by 2016.

State and local leaders similarly can find compelling ways to educate their communities about the critical role international commerce plays in local job growth and economic vibrancy. Most important, we need an active, national collaboration among all parties—government, education, business, parents, students, and nonprofit organizations—to make a 21st century curriculum and proven measurement practices part of every American classroom.

Apple Will Continue to Lead Change

As a company with business operations around the world, Apple is interested in global education and a workforce well-versed in 21st century skills.

As a partner to education, Apple collaborates with educators, policy makers, businesses, and communities to help deliver a 21st century learning environment that:

- Engages students with various learning styles and preferences
- Allows students to be creative producers and publishers of content, not just consumers
- Extends learning beyond the classroom and the school day
- Allows teachers to personalize instructional content
- Increases feedback to students, teachers, and parents
- Provides accessibility features for students with special needs
- Enables students to communicate, collaborate, and share their work globally

One way Apple recently collaborated with other partners to address the need for global awareness was with a 10-day trip in July, 2006 taken by 50 Apple Distinguished Educators (ADEs) and 20 participants from Apple and EF Educational Tours to Germany and the Czech Republic. This trip had the goals of designing curriculum and providing experiences to further global awareness.

The result was a new Global Awareness collection, launched in October 2006 on the Apple Learning Interchange, providing educators with a space to find authentic global awareness curriculum, collaborate with the authors, and develop and publish their own contributions.

“While states and school districts now face a challenging economic environment, the need for 21st century skills is not going away. Indeed, it will only become more important with time.”

— “Learning for the 21st Century,”
Partnership for 21st Century Skills

The Global Awareness collection contains:

- Multidisciplinary units
- An annotated collection of online project spaces and resources
- Collaboration tools to engage with authors and online members
- Authoring tools to allow others to add to the collection

This new content is available to educators worldwide free of charge online at <http://www.apple.com/globalawareness>.

Creating a 21st century learning environment is not something that schools can achieve overnight. It's a long-term goal that requires leadership, resources, and a roadmap that lets schools "jump on" wherever and however they can, move ahead incrementally, and leverage their existing investments in technology, content, and training.

For nearly 30 years, Apple has led the way in providing educators with powerful, easy-to-use technologies to advance teaching and student achievement. Apple's digital authoring tools used in teaching today include iPhoto, iWeb, iMovie, iDVD, GarageBand, and iTunes. Apple notebooks, as well as iPod players that students bring from home, have become common fixtures in schools, with Apple providing lesson plans and sample projects teachers can use to put these tools to work in the classroom and beyond.

Other Resources

Many businesses, organizations and educators are actively—and effectively—involved in making our schools and students better prepared for success in the global community. Resources include:

- **Asia Society.** The Asia Society (<http://www.asiasociety.org>) is a nonprofit, nonpartisan international education organization dedicated to strengthening relationships and deepening understanding among the peoples of Asia and the U.S. Founded in 1956 by John D. Rockefeller 3rd, the Society reaches audiences around the world through its headquarters in New York and regional centers in Houston, Los Angeles, San Francisco, Washington, D.C., Hong Kong, Manila, Melbourne, Mumbai, and Shanghai.
- **EF Education.** Founded in Sweden in 1965, EF Education (<http://www.ef.com>) is the world's largest private education company centered on language learning, educational travel, cultural exchange, and academic programs. EF Educational Tours allows educators to enrich their classroom teaching through international travel. EF escorted tours, known as the Global Classroom, help student groups "learn it by living it" as they experience firsthand the very best historic, cultural, and natural sights in the world.
- **George Lucas Educational Foundation.** The George Lucas Educational Foundation (<http://www.edutopia.org>) is a nonprofit operating foundation to celebrate and encourage innovation in schools and reinvent them for the 21st century. Since it was founded in 1991, it has been documenting, disseminating, and advocating for exemplary programs in K-12 public schools to help these practices spread nationwide. The foundation has published stories of innovative teaching and learning through a variety of media, including a magazine, an e-newsletter, CD-ROMs, DVDs, books, and its website.
- **Global SchoolNet Foundation (GSN).** Global SchoolNet (<http://www.globalschoolnet.org>) is an international not-for-profit network of 90,000+ online educators who engage in online project-based learning activities. Since its inception, Global SchoolNet has reached more than a million students from 45,000 schools across 194 countries. GSN seeks opportunities to partner with schools, universities, communities, businesses, and other organizations to co-develop free or low cost programs to help students become literate and responsible global citizens and to prepare them for the workforce.

- **iEARN.** Begun in 1988, iEARN, the International Education Resource Network (<http://www.earn.org>), is the world's largest nonprofit global network enabling teachers and young people to use the Internet and other technologies to collaborate on projects that both enhance learning and make a difference in the world. iEARN is made up of more than 20,000 schools in more than 115 countries and engages more than 1 million students each day in collaborative project work.
- **International Baccalaureate Organization (IBO).** The IBO (<http://www.ibo.org>) is a nonprofit educational foundation recognized for its leadership in the field of international education, encouraging students to be active learners, well-rounded individuals, and engaged world citizens. Founded in 1968, IBO currently works with nearly 2,000 schools in 124 countries to develop and offer three challenging programs to approximately 500,000 students aged 3 to 19 years.
- **Partnership for 21st Century Skills.** The Partnership for 21st Century Skills (<http://www.21stcenturyskills.org>) is the leading advocacy organization focused on infusing 21st century skills into education. The organization brings together the business community, education leaders, and policymakers to define a powerful vision for 21st century education to ensure every child's success as citizens and workers in the 21st century. The Partnership encourages schools, districts, and states to advocate for the infusion of 21st century skills into education and provides tools and resources to help facilitate and drive change. Apple is a founding member of the organization and Karen Cator, Apple's Director of Education Leadership and Advocacy, serves as its current Chair of the Board. The Partnership for 21st Century Skills is a nonprofit organization and was at its inception supported by the U.S. Department of Education.

References

Committee for Economic Development. (2006). *Education for Global Leadership: The Importance of International Studies and Foreign Language Education for U.S. Economic and National Security*. http://www.ced.org/docs/report/report_foreignlanguages.pdf

Granitsas, A. (2005). Americans are Tuning Out the World. *YaleGlobal*, 24. <http://yaleglobal.yale.edu/display.article?id=6553>

Manzo, K. (2006). Students Taking Spanish, French; Leaders Pushing Chinese, Arabic. *Education Week*. <http://www.edweek.org/ew/articles/2006/03/29/mismatch.h25.html?levelId=1000&levelId=1000>

McGray, D. (2006). Lost in America. *Foreign Policy*. http://www.foreignpolicy.com/story/cms.php?story_id=3429

Partnership for 21st Century Skills. (2002). *Learning for the 21st Century*. http://www.21stcenturyskills.org/downloads/P21_report.pdf

Rifkin, G. (2006). The Soft Skills of Global Managers. *Harvard Management Update*. http://harvardbusinessonline.hbsp.harvard.edu/b02/en/common/item_detail.jhtml;jsessionid=FA03CDUCX31NQAKRGWDSLEQBKE0YIISW?id=U0603A

The 100 People Foundation. <http://www.100people.org>.

Wike, R. (2006). America's Image Slips, But Allies Share U.S. Concerns Over Iran, Hamas. *Pew Global Attitudes Project*. <http://pewglobal.org/reports/display.php?ReportID=252>