

CATCHING UP OR LEADING THE WAY
American Education in the Age of Globalization

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- China decided to change its test-oriented education into talent-oriented education. To engineer this change, China made a conscious, global search for models, education systems that are good at producing innovative talents. As a country with the most Nobel laureates, most original patents, most scientific discoveries in the 20th century, and largest economy in the world, the US seems a reasonable candidate.
- The US has been trying hard to implement what China has been trying to be rid of. An increasing number of states and the federal government have begun to dictate what student should learn, when they should learn it, and how their learning is measured through state-mandated curriculum standards, high school exit exams, and NCLB.
- The reforms that aim to save America are actually putting America in danger. NCLB is sending American education into deeper crisis because it is likely to lead increasing distrust of educators, disregard of students' individual interests, destruction of local autonomy and capacity for innovation, and disrespect for human values.
- American education is at a crossroads. There are two paths in front of us: one in which we destroy our strengths in order to "catch up" with others in test scores and one in which we build on our strengths so we can keep the led in innovation and creativity. It is my hope that this book can help change the discourse about education in the US and convince some of the readers that "leading the way" is a better idea.
- Only about one-half (52%) of students in the principal school systems of the 50 largest cities complete high school with a diploma. That rate is well below the national graduation rate of 70% and even falls short of the average for urban districts across the country (60%). Only six of these 50 principal districts reach or exceed the national average. In the most extreme cases, Baltimore, Cleveland, Detroit, and Indianapolis, fewer than 35% of students graduate with a diploma.
- In South Korea, 38% of all undergraduates receive their degrees in natural science or engineering. In France, the figure is 47%, in China 50% and in Singapore, 67%. In the US, the corresponding figure is 15%.
- Some 34% of doctoral degrees in natural sciences including the physical, biological, earth, ocean and atmospheric sciences and 56% of engineering PhDs in the US are awarded to foreign-born students.
- US ranks 19th in graduation rate in the world. Forty years ago, we were first.
- The US has the highest rate of child poverty among developed nations, a condition that has persisted for decades, without clear signs of disappearing in the near future.
- For those who are especially worried about the US losing its economic competitive edge because of lower scores of US students, Baker writes, "In short, the higher a nation's test score 40 years ago, the worse its economic performance.
- If test scores are not reliable indicators of the quality of education or good predictors of a nation's or an individual's success, how did the US come to accept the general notion that its public education system is broken and to support the reform efforts to put more standards and tests in schools?

- If low test scores are not a problem, does that mean American education is not in crisis? Definitely not, our world is going through a dramatic transformation brought about by economic globalization and technological advances. It is a fact that the US is facing stiff competition from countries such as China and India. It is also a fact that the US has been losing jobs to other countries. American schools are undoubtedly not adequately equipped to prepare future citizens to live successfully in the new world. What we need is a paradigm shift in thinking about education, both what we should teach and how we should deliver it. The remainder of the book addresses these questions.
- To overcome the reluctance of state legislators to increase taxes to pay for school improvements, governors frequently had to mobilize the public on behalf of public school reforms. Fear was used. Lower test scores had been accepted as a sure sign of a deteriorating education system, and a poor education system was seen as the cause of economic troubles.
- To accommodate increased time in English and math, 44% of districts report cutting time from one or more other subjects or activities (Social studies, science, art and music, physical education and lunch/recess) at the elementary level. The decreases add up to a total of 145 minutes per week across all of these subjects, or nearly 30 minutes per day, for an average reduction of 32 percent in the total instructional time devoted to these subjects since 2001-02.
- Exit exams encourage teachers to spend more class time on tested subjects. More than limiting what is taught and learned, state tests also constrain how teaching and learning are conducted. A study found that more than 30% of teachers nation-wide report that they do not use computers when teaching writing because the state writing test is handwritten. This situation is astonishing considering that computers are not only the tool of the trade for writing but also have been found to be especially beneficial when used to teach writing. It is even more unsettling when one considers that schools are supposed to prepare students for the future, which is increasingly powered by technology.
- The international learning gap is a myth. The fear has been founded on misinformation and misperceptions. The road to authoritarianism has been built on incorrect assumptions and politics.
- What has been considered the weaknesses of US education are precisely its strengths and many countries in the world are working hard to emulate it.
- The US ranked number one of 131 countries on the 2007-08 Global Competitiveness Index, which measures the ability of countries to provide high levels of prosperity to their citizens. The core innovations that drove the global digital revolution were created in the US; the leaders of the computer and Internet industries are from the US. Nearly two-thirds of the 300,000 patents issued in 2002 went to Americans.
- The RAND corporation found that the US continued to lead the world in science and technology, accounting for 40% of total world spending on research and development, receiving 38% of the patents for new technology inventions issued in the industrialized nations, employing 70% of the world's Nobel Prize winners, and serving as home to three-fourths of the world's top 40 universities.
- In 2003, over 85% of all adults 25 years or older reported that they had completed at least high school, 27% had attained at least a bachelor's degree. Both measures are all-time highs.
- If US education has been at risk for more than 25 (or 40) years, and continues to deteriorate, and if education is said to determine a nation's and its citizens' success, how can we explain the fact that America continues to be competitive?
 - We can come up with a number of propositions. The first is that education is not related to a country's economic success. This proposition can be easily refuted because it has been generally established that the educational attainment of a country's citizens has a direct effect on its economic prosperity and other indicators of success.

- The second proposition is that US education has not been in crisis – at least not in the way the reformers have suggested. The crisis was manufactured for political reasons.
- Because test scores do not predict a nation’s success and the persistent poor performance of US students on international tests since the 1960s has not resulted in its demise, it is useful to consider what really helped the US to maintain its global lead.
- Thus far, most international studies have focused on the technical aspect of education but failed to understand the philosophical aspects.
- In the lack of standards and evaluation, we see one of the greatest values of American culture expressed in education: the value of individuals. Deeply ingrained in the American culture are the fundamental rights of the individual, respect for and celebration of individual differences.
- The talent show is a demonstration of this belief, expressed through the vehicle of American education, which according to Thomas Jefferson should be adapted to the years, to the capacity and to the condition of every one, and directed to their freedom and happiness. Thus, the talent show held by a public school should allow each child who wishes to participate to do so.
- Talent shows recognize a broad range of talents, not only those sanctioned or desired by certain groups. As a result, it preserves a pool of diverse talents for the country, and such diversity is precisely one of the factors that has kept America strong.
- The talent show encourages initiative and responsibility. The freedom to enter the show is also a responsibility for the students. They must take the initiative to enter and assume the responsibility to prepare for the show, to be there on time, and to deliver their best performance. As well, they must face the consequences of their choices and actions.
- The activity sends a strong message to the community, the public, and the parents that our schools value different talents, that their children are all talented in different ways.
- The activity helps all the children to be proud of their strengths rather than focusing on their weaknesses.
- For individuals, extracurricular activities affirm the value of their existence, boost their self-esteem and sense of success, encourage them to pursue their own interests, and help justify and maintain their interest. For a nation, a broader definition of success and of what talents are valuable, beyond academic performance in a few subjects, preserves and cultivates a diversity of talent. Such diversity is essential for adapting to changing societies and economies.
- Scientists have found that genetic diversity enhances a population’s ability to adapt to a changing environment.
- Chua argues the hyperpowers succeeded by harnessing the skills and energies of individuals from very different backgrounds and by attracting and exploiting highly talented groups that were excluded in other societies. In addition, these powers, except for the US – at least not yet, ultimately lost their dominance and faded into history because they somehow lost their tolerance.
- A more multicultural urban environment makes US born citizens more productive because the immigrants have skills that complement those of the American people and they provide valuable services that Americans would prefer not to do.
- The belief that every child can learn and prosper is deeply ingrained in the mind of American teachers. As a result of this belief, American students are given many second chances instead of being judged and sorted into different groups based on their performance at a very early stage.
- Turner compares secondary education in the US and Britain and suggests that the American system is characterized by contest mobility, whereas sponsored mobility is norm in the British system. According to Turner, in a system of contest mobility, everyone is assumed to be equal and

participates in the same contest for upward social mobility. Achievement is attributed directly to the effort each contestant puts in.

- Sponsored mobility systems tend to identify potential members for each social group early, according to their perceived qualifications and merit. Students in sponsored mobility systems are subject to path-defining examinations early in their lives and are sorted accordingly toward the forms of schooling and training that are deemed appropriate to their perceived talents. Consequently, the talents that are valued and hence suitable for promoting to elite social groups are announced and encouraged early, whereas other talents are suppressed or sorted into less desirable social groups.
- A World Values Survey found that when asked to select the important aspects in a job, about 82% of Americans mentioned a job that is interesting. In stark contrast, only 18% of Chinese mentioned this. More than 42% of Americans selected doing an important job as their first choice when looking for a job, while only 23% of Chinese made this same choice.
- American education is riddled with serious problems, such as the vast inequalities between the rich and the poor; the outdated, irrelevant and America-centric curriculum; the lack of qualified teachers; the disengagement of students; and the increasing faith in testing.
- The strengths of American education are also at least partially responsible for the poor performance of US students on international tests. Students spend considerably less time on the tested subjects such as math, reading and science than their peers in high-performing countries because they are engaged in other activities.
- China's new curriculum aims to equip students with patriotism, collectivism, a love for socialism, and the Chinese cultural traditions, as well as moral-ethic values, and democratic spirit with Chinese characteristics. Furthermore, the new curriculum has as its goals fostering creativity, developing practical abilities, and cultivating scientific and humanistic spirit as well as environmental awareness. It is also intended to ensure that students develop physical and mental fitness, good aesthetic tastes, and healthy lifestyles.
- Singapore's key strategies include explicitly teaching critical and creative thinking skills, reducing subject content, revising assessment modes, and placing greater emphasis on processes instead of on outcomes when appraising schools.
- Despite China's double-digit growth for more than two decades, its economy remains one that is labor intensive rather than knowledge intensive. The growth has been largely fueled by its vast and cheap labor instead of technology. In other words, as the world's factory, China has been mostly making things invented or designed elsewhere.
- China presently operates the world's largest formal education system, with a total student population of more than 300 million, an increase of 100 million since 1985.
- Education always performs two functions – to select and to educate. A nation's education system functions on behalf of society to decide what kind of talents, knowledge, and skills are useful and what kinds are not.
- Hailed by some as China's fifth grand invention (after the compass, gunpowder, paper, and movable type), the keju (Imperial or Civil exam) was an effective way for the emperors to identify and recruit talented individuals to join the ruling class from a broad pool, instead of from a small group of existing elites and their descendents.
- Although the keju itself was not an education system but a political system, because of its high stakes, it determined what education was about in China for centuries. Because of its exclusive focus on memorization of Confucian classics, the keju instilled a worship of the past and of book knowledge, and hence a disdain for physical labor, technology and natural sciences.

- A century has passed since the keju was officially ended, but its spirit lives on in the body of the National College Entrance Exam.
- A college degree is essential not only for social mobility but also for geographic mobility. In China, a person's legal residency is determined by place of birth. Migrant workers' children are not entitled to attend the local schools. Attending college has been a primary way to earn the right to change one's legal residency because many cities make college degrees a minimal requirement for granting residency.
- There are many cases of high scores but low ability in China. Many graduates of Peking University (China's Harvard) cannot keep a job. Most of the valedictorians of China's high schools do not become leaders in their fields.
- To be creative is to be different. Creative people often have ideas, behaviors, beliefs, and lifestyles that deviate from the norm and tradition. How these people and their ideas are treated by others has a defining effect on creativity.
- Research on the social and contextual influences on creativity has found that, in general, tolerance of deviation from tradition and the norm resulted in more creativity. For example, a comprehensive study of families with highly creative children found that on average these families have less than one specific rule for their children, whereas families without highly creative members have an average of six.
- Research also found that in individualist culture such as the US, creativity is considered the expression of a unique individual and thus should be respected and valued; in collectivist cultures, on the other hand, the emphasis is on continuity and tradition and thus it is important for an individual not to be different.
- Most US children do not view schooling as central to their lives, whereas most Chinese children do. Thus, US children generally are less exposed to the creativity-killing machine – the school.
- Creativity cannot be taught, but it can be stifled. The creativity gap between Americans and Chinese exists not because US schools teach creativity more or better than their Chinese counterparts. They just do not thwart creativity as much as the Chinese.
- Education, the traditionally local social institution, thus faces a number of significant challenges in preparing children to live in the global society. The first challenge concerns what we can do to help our children secure a job that will provide for them and their families.
- The second challenge involves what we can do to help our children live, work, and interact with people from different cultures and countries.
- Many Americans lack sufficient knowledge about other world regions, languages, and cultures, and as a result are likely to be unprepared to compete and lead in a global work environment.
- The third challenge for education concerns what is needed to help our children adopt a global view in their thinking and develop a sense of global citizenship. Although globalization may help spread democracy and lift people out of poverty, it has the potential to lead to more cultural clashes and conflicts, destroy local cultures, breed hostility, create new pockets of poverty, and ruin the environment.
- As citizens of the globe, students need to be aware of the global nature of societal issues, to care about people in distant places, to understand the nature of global economic integration, to appreciate the interconnectedness and interdependence of peoples, to respect and protect cultural diversity, to fight for social justice for all, and to protect planet Earth – home for all human beings.
- The first graphic Web browser, Mosaic, was released in 1993; but by 2008, just 15 years later, there were more than 1.4 billion internet users. That is more than 21 percent of the world's population.

- Google was founded in 1998 with \$100,000. In less than six years, Google became a company worth \$23 billion. Our schools have been teaching the skills and knowledge needed for an industrial economy, preparing our children to work only in the physical world. The challenge our schools must face is to begin teaching the skills and knowledge needed for the virtual economy.
- Daniel Pink's six essential senses:
 1. design: the ability to create something physically beautiful and emotionally transcendent,
 2. story: the ability to fashion a compelling narrative,
 3. symphony: the ability to see the big picture and be able to combine disparate pieces into an arresting new whole,
 4. empathy: the ability to understand what makes their fellow woman or man tick to forge relationships, and to care for others,
 5. play: the ability to laugh and bring laughter to others, and
 6. meaning: the ability to pursue more significant desires: purpose, transcendence, and spiritual fulfillment
- Core assumptions about what schools should teach:
 1. We must cultivate skills and knowledge that are not available at a cheaper price in other countries, or that cannot be rendered useless by machines.
 2. Creativity, interpreted as both ability and passion to make new things and adapt to new situations, is essential.
 3. New skills and knowledge are needed for living in the global world and virtual world.
 4. Cognitive skills such as problem solving and critical thinking are more important than memorization of knowledge
 5. Emotional intelligence – the ability and capacity to understand and manage emotions of self and others is important.
- In the increasingly globalized world, what is needed is a diversity of talents rather than individuals with the same competencies. This requires us to move away from not only adopting international standards but also national standards and testing. Each local community may have something special, something unique to offer on the global market. An international uniform curriculum or national curriculum can only serve to destroy local traditions and strengths.
- Developed nations must take responsibility for deliberately cultivating new talents because they are endowed with more resources. They must not fall back to compete with developing nations in the same domains, for both their own sake and the benefit of the world.
- Foremost among the global competencies is the abilities to communicate effectively across linguistic and cultural boundaries, to see and understand the world from a perspective other than one's own, and to understand and appreciate the diversity of societies and cultures.
- I define global competency as the knowledge and skills that help people understand the flat world in which they live, the skills to integrate across disciplinary domains, to comprehend global affairs and events, and to create possibilities to address them. Global competencies are also the attitudinal and ethical dispositions that make it possible to interact peacefully, respectfully, and productively with fellow human beings from diverse geographies.
- Our children, who will live in this village much longer than we will, need to also understand that globalization's negative outcomes exploitation of poor countries, for example, can affect their own lives.
- We need citizens who can lead global efforts to reduce distrust and fear among different people. To do so requires a new mindset that considers all human beings as "us," that helps transcend traditional

racial, religious, political, and other boundaries that have been used to divide human beings into “us” and “them.”

- A culture is the system of shared beliefs, values, customs, behaviors, and artifacts that the members of society use to cope with their world and with one another, and that are transmitted from generation to generation through learning.
- Cross-cultural competency can be viewed as a general psychological ability that includes attitudes, perspectives and approaches to new, different cultures.
- John Dewey suggest such competencies can be developed by confronting and surmounting differences in ways of thinking, value systems, and habits of mind. According to Dewey, education for global understanding must be supported by the notion of unity in diversity, a solidarity among human beings that is made possible only through interaction between different perspectives.
- Although communicative competency is important, language also serves as a window into the shared beliefs, values, customs, behaviors, and artifacts that the members of society use.
- A truly troublesome issue with all the available definitions of digital competence is their failure to recognize the virtual world as something different from the physical world. Almost all definitions seem to start from the viewpoint that the virtual world is the physical world, only accessed through technology, but the virtual world is fundamentally different. Although some traditional skills and abilities apply, the virtual world functions differently enough to require a different set of skills and knowledge