

Human Capital Development: America's Greatest Challenge

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INTRODUCTION

In his 1996 State of the Union Address, President Clinton cited the need for K-12 schools to adopt rigorous academic standards as one of the six challenges facing America. Soon afterwards, 41 of the nation's Governors and 49 corporate leaders met at the National Education Summit, hosted by the IBM Corporation, and agreed that standards and assessments were the number one priority. Pennsylvania Governor Tom Ridge, who attended the summit, recently appointed Paul O'Neill, Chairman of Alcoa, to chair a new state commission to recommend the content of these standards for Pennsylvania's schools.

This essay explains why the nation's political and economic leaders urged radical changes in our education system. First, it reviews arguments for why highly developed human capital will be the source of comparative advantage in the twenty-first century global economy. Second, it highlights problems in America's human capital development system K-12, post-secondary vocational training, higher education and on-the-job learning that must be corrected if the nation is to compete effectively. Third, it argues that K-12 schools should adopt rigorous academic standards, benchmarked against the most demanding in the developed world, as a strategic intervention that would reverberate through our entire human capital development system.

What follows may sound like doom and gloom, but it is meant to be a wake-up call. The future is not predetermined. Americans can make the necessary changes if they want to. The first step for all of us is to admit that we have a very big problem on our hands that will take a generation to correct. If we fail, we will leave our children and grandchildren a legacy not merely of economic uncompetitiveness and a much lower standard of living, but a seriously diminished quality-of-life stemming from an enormous gap between a minority of haves and a majority of have-nots that will undermine the basis of civil society and our democracy.

I. The Significance of Human Capital Development

It all has to do with a concept called human capital, or the education, skill levels, and problem-solving abilities that will enable an individual to be a productive worker in the global economy of the twenty-first century. To understand why this is so, let us examine the arguments made by Massachusetts Institute of Technology economist Lester Thurow in his provocative study, *Head-to-Head: The Coming Economic Battle Among Japan, Europe, and America* (1992).

In the first 25 years after World War II, the global economy was characterized by niche competition. "The United States," according to Thurow, "exported agricultural products our foreign competitors did not grow, raw materials they did not have, and high-tech products they could not build." High-wage products in Germany and Japan were low-

wage products in the United States. Imports to America from these countries did not threaten our jobs, and our exports did not threaten theirs.

In these years, America was the undisputed King-of-the-Hill. In late 1940s, America's gross domestic product (GDP) was half of the world's, and our per capita GDP was 4 times that of West Germany and 15 times that of Japan.

The last 25 years have been very different indeed. By the late 1980s, our share of the world's economy had fallen by half, and in 1990, Japan's per capita GDP was slightly larger than ours. In last 20 years, we have lost our dominance in steel and machine tools, chemicals and autos, and television and consumer electronics.

Between 1973 and 1992, while per capita GDP grew 25 percent (adjusted for inflation), only the top 20 percent of American male workers improved their standing; the next 20 percent were stagnant and the bottom 60 percent actually experienced a decline in real wages. Our standard of living did not fall at the same time, largely because women entered the labor force in record numbers, but absent polygamy there will be no third spouse to send into the labor force to bail us out in the future. Moreover, since 1989, even median household income has fallen despite the fact that Americans now work longer hours and a greater proportion now hold at least two jobs than in the last half century.

Inequality in the distribution of income and wealth, according to Lester Thurow (1995), is also growing. Among men working full time, the earnings gap between the top and bottom quintiles doubled in the last 25 years. Between 1979 and 1994, while the bottom three-fifths of American families lost ground in terms of real income, the second fifth gained 6 percent, the top fifth gained 25 percent, and the top five percent gained 44 percent. The share of wealth held today by the top one percent of the population now exceeds 40 percent, a proportion last observed in the late 1920s.

Why the sharply diverging trends in inequality? An informal poll of 18 prominent economists, conducted at the Federal Reserve Bank in New York at the end of 1994, concluded that 10 to 20 percent of the growing wage disparity was due to international trade; 10 percent came from declining union memberships and 9 percent from the erosion of the minimum wage. But almost half of the increases in income inequality resulted from technological changes that benefit the better educated. It is clear that America must adapt to the human capital challenges brought by the global economy and rapid technological change.

The next quarter century, Thurow argues, will be characterized by head-to-head competition in seven industries that offer high-paying jobs to their workers and bring prosperity and world prestige to their countries. These brain-intensive industries include computers and software, robotics and machine tools, civilian aviation, microelectronics, materials sciences, biotechnology, and telecommunications.

The scholarly journals and the popular press have been filled with statistics demonstrating that few new jobs can be filled by unskilled workers and that the large

majority of these jobs demand far higher skill levels than in the past. The days when a poorly educated worker could leave high school and find a well-paying job in a factory are long gone.

But rather than trot out these statistics again, it is more informative to illustrate with three examples why human capital is becoming the comparative advantage of the future.

Product Technologies

The first of these concerns product technologies. What is required for companies to invent a product and earn big profits from it? A bit over a dozen years ago, IBM and Apple introduced personal computers on whose sales these companies made a fortune. But in time, other manufacturers discovered how to produce personal computers, and very quickly the prices of these machines dropped precipitously while their speed and power increased many times over. In short, personal computers ceased being unique products and became instead clones or commodities just like so much corn or wheat or potatoes.

Commodities command paper-thin profit margins. The lesson for companies is to invent a product, mass-produce it while profit margins are high, and then, when competitors catch up forcing lower prices and reduced profits, introduce a new product that will put them back on the gravy train.

Product cycles (not how long you can use your widget, but how long before the assembly line that makes it must change (have been shrinking with remarkable speed. In the past decade, the product cycle in the automobile industry has fallen from seven and a half years to six and in several model lines to five and four years. The average for all manufactured products has fallen from four years to two, and in the computer industry, it has shrunk to roughly six months.

Consider the abilities of employees that firms must have to compete successfully in product technologies, and you understand why the demand for highly skilled workers who can learn quickly and adapt to change will increase sharply in the years ahead.

Process Technologies

The second illustration of future trends concerns process technologies. In the nineteenth and twentieth centuries, Britain and America grew rich and powerful creating products. But in the twenty-first century, the advantage based on new products cannot be sustained easily because of reverse engineering (that is, producing more cost-effectively a product someone else has invented. The Japanese have made reverse engineering an art form.

The American electronics industry is a case in point. In the last several decades, leading new products were introduced into the mass consumer market: the video camera, the videocassette recorder, the fax machine (American inventions) and the compact disc

player (a Dutch invention). But in terms of sales, employment, and profits, all four of these products have been dominated by the Japanese.

What used to be primary (inventing new products) has become secondary and what used to be secondary (inventing and perfecting new processes) has become primary. It is instructive to learn that the United States spends twice as much in research and development on product technologies as process technologies; while in Japan the opposite is true. Nonetheless, it is clear that workers must possess high skill levels if they are to be employed in firms vying for the lead in process technologies.

High Performance Work Organizations

The third illustration concerns new high performance work organizations, or how successful companies will be configured in the future. To stay competitive in the global economy, corporate America has been engaged in a dramatic downsizing process. What is unique about this latest round of corporate layoffs is that it affects largely white-collar workers rather than blue-collar workers, as in the past.

When middle managers are eliminated, front-line workers must assume their responsibilities and develop their skills, or the strategy of thinning middle management's ranks cannot succeed. This means that ordinary, shop-floor workers must be able to use computer-aided design and computer-aided manufacturing technologies, manage just-in-time inventories, operate flexible manufacturing systems, and employ statistical quality control. For example, as Thurow reminds us, without statistical quality control "today's high-density semiconductor chips cannot be built (they can be invented, but they cannot be built)."

The central argument of *America's Choice: High Skills or Low Wages* (1990), the Report of the Commission on the Skills of the American Workforce, was summarized by William Brock, one of the Commission co-chairs and former U.S. Labor Secretary. If companies in every country in the world can now buy "idiot-proof machinery" to compensate for workers with terribly deficient skills, and "if there are people in other parts of the world who will work for \$5 per day and they have the same equipment as Americans who want \$10 or \$15 per hour, either we have to change the way people work here (not only work harder, but smarter, more effectively) or we have to compete on the basis of wages."

Unfortunately, the evidence seems to suggest that America is content to compete on the basis of wages, which means an inexorable trend downward, instead of an effort to build skills up.

What kind of workers must America have in the future? Think about the qualities workers must have if companies are to succeed in product and process technologies. Consider the kind of employees that high-performance work organizations need to succeed without layers of middle managers. They will have to be flexible, adaptable,

quick learners and problem solvers. Are these the kind of skills being produced by America's human capital development system?

II. Problems with America's Human Capital Development System

The global economic competition can be likened to a kite race in which each nation's entry bears its respective flag. Think of it as a two-frame cartoon. In the first frame, the American kite soars ahead leaving the other kites behind. In the second frame, the kites of other nations pass us by, but we can see why: attached to the tail of our kite is a heavy weight. The weight represents the results of the National Adult Literacy Survey (1993), the most comprehensive survey ever taken of adult literacy. Under contract from the federal Department of Education, the Educational Testing Service conducted hour-long personal interviews with a national sample of 13,500 individuals above the age of 16. They asked not about old notions of literacy, such as the ability to sign one's name, completion of five years of schooling, and the scores achieved in school-based measures of reading achievements. Instead, their definition of literacy focused on the ability to use printed and written information to function in society, to achieve goals, and to develop personal knowledge and potential.

The tasks that interviewees were asked to perform in three areas of competency were not difficult even at the highest level, as the following examples illustrate. Prose questions tested their understanding of information (e.g., summarize the meaning of key paragraphs in a newspaper column). Document questions probed their ability to comprehend information (e.g., interpret a simple chart containing varied percentages of "yes" and "no" responses to different statements). Quantitative questions consisted of multiple-step arithmetic operations (e.g., calculate the cost of carpeting a room given the dimensions in linear feet and the cost per square yard of carpet). Scores were divided into five levels of functional ability.

The vast majority of high school graduates should be able to perform in the top two levels. Yet fully half of the American workforce some 90 million adults fell into the bottom two levels, meaning they are hopelessly ill equipped for the jobs of the twenty-first century economy. Only 15 percent tested at the fourth level, and only 3 to 4 percent, some 6 to 8 million adults, tested at the highest level.

What explains these results? What is going on in the nation's human capital development system? Let us examine four key components: K-12 education, post-secondary vocational training, higher education, and on-the-job learning.

K-12 Schools

Polls about the state of education consistently reveal contradictory opinions. Upwards of 80 percent of Americans agree there is an educational crisis in the nation, but less than 25 percent believe it affects their children or their school. Put somewhat differently, American parents grade 80 percent of the nation's schools C or below; yet 72 percent grade their own children's school A or B.

The contradiction, more apparent than real, derives from a mistaken perception that urban school problems are those of the nation as a whole. Most suburban residents know that students in their schools drop-out half as often, score much better on standardized achievement tests, and enroll in college at far higher rates than their urban counterparts. Nor do suburbanites find these outcomes surprising because they are aware of the considerable difficulties faced by inner-city children, including poverty, broken families, drugs, crime, poor health and limited school funding. Stories about the problems of urban education leave parents and citizens who live outside the cities feeling good about their own schools. Unfortunately, comparing suburban schools with city schools is seriously misleading, and it results in an ill-founded complacency that obscures the need for fundamental reform in all the nation's schools. Simply put, it is the wrong comparison.

Two others are far more appropriate. First, we should be comparing our children to their counterparts in the rest of the developed world because they represent the competition of the future. Depending on the methodology used in international studies of math, science and critical thinking skills, only between 10 percent and 30 percent of American 17-year-olds can be considered competitive. Worse, the great majority of our students in fifth, eighth and twelfth grades score not at average levels, but near the bottom in these subjects when compared to students elsewhere in the developed world. One particularly illuminating study, by Harold Stevenson and James Stigler (1992), compared math scores among 60 fifth grade classrooms a mix of public, private and parochial schools 20 each in metropolitan Chicago, Beijing (China), and Sendai (Japan). Only one of the Chicago area classes had an average score higher than the lowest score for the classes in China and Japan. When students in all three metropolitan areas were ranked by individual test scores, only three American children appeared in the top five percent, one-thirteenth of our statistically projected share.

Second, we should be comparing the human capital of our children to the skills required by the jobs of the twenty-first century global economy. The mismatch here, as reported first in *Workforce 2000: Work and Workers for the 21st Century* (1987) and corroborated by many studies since, is stunning. When projecting the skills of all new workers entering the workforce between 1985 and 2000, 78 percent have the skills for only the bottom 40 percent of new jobs, while only 5 percent have the skills for the top 40 percent of new jobs.

Why do our children fare so badly in these comparisons? Part of the answer is structural. Content aside, in Western Europe, Canada, and the Pacific Rim, students go to school 220 days per year; in Japan they go 240 days per year. In many of these nations, children attend school 8 hours a day. In America, our children go to school 180 days a year and 6 hours a day. When calculated over the full K-12 experience, Japanese students graduate with four more years of classroom time than American students. Little wonder that it takes an American student with a masters of science degree to equal the mastery of statistics possessed by a Japanese high school graduate.

"The great accomplishment of Japanese primary and secondary education lies not in the creation of a brilliant elite . . . but in its generation of such a high average level of capability," writes Thomas Rohlen, author of *Japan's High Schools* (1993). "The profoundly impressive fact is that Japan is shaping a whole population, workers as well as managers, to a standard inconceivable in the U.S." Part of the answer is cultural and has a great deal to do with the expectations that parents and teachers have for their children. American parents are far more likely to attribute school success to ability while Asian parents are far more likely to attribute success to effort. While the quality that American teachers treasure most in their students is sensitivity, Asian teachers treasure clarity.

But our children should not be let off the hook either. When asked to rate themselves, 75 percent of American primary school students thought they were doing just fine, compared with only 37 percent of Japanese students. When a national poll compared attitudes about how well students were doing in reading, writing, math, and understanding instructions, students and parents graded students roughly two to three times higher than did college administrators and their employers. When American students are compared with students in Korea, Canada, and other competing countries where academic standards are somewhat more lenient than Japan's, we see that American children do one-third to one-fifth the amount of homework, watch three times as much television, and, as a result, achieve roughly one-fourth the test score levels realized elsewhere.

Post-secondary Vocational Training

A little-appreciated fact about the future is that while only 30 percent of new jobs in 2000 will require college degrees, roughly 89 percent will require some post-secondary vocational training. Yet for every dollar of taxpayer money we spend on post-secondary training, we spend \$55 subsidizing college students. The United States is unique in the world in not having an organized post-secondary training system for the non-college bound. Our global competitors do it differently. Other nations spend far more than we do on post-secondary training: Britain, France, and Spain spend twice as much; Germany, three times; and Sweden, six times. When the quantity and quality of post-secondary training programs are compared, Japan ranks first, Germany second, America eleventh. Our apprenticeship programs touch only 300,000 workers, less than 0.3 percent of all workers. A German executive, quoted in *America's Choice*, put it this way: "America has too many people in college and not enough qualified workers. The U.S. has outstanding universities, but it is missing its middle."

Higher Education

While it appears that our K-12 system is in considerable need of fundamental change, our vaunted system of higher education must surely pull our chestnuts from the fire. Here is where we rank highest, here is where we excel. Our universities are the best, a point proven by the fact that students flock here from all over the world. Unfortunately, what is true about our elite universities is hardly true about all of higher education. America has 3,600 colleges and universities: 2,100 four-year schools and 1,500 two-year schools. By some estimates, however, only 200 to 600 of these schools have selective standards for admission; that is, the balance of these schools rarely reject applicants based on their

level of academic achievement. So why work in high school? Small wonder that the average high school senior does less than one hour of homework per night. "Adolescents are like adults. They do as much as they have to in order to get what they want," writes Albert Shanker, President of the American Federation of Teachers. "The young people who want to go to elite schools must meet high standards, and they work hard. But the rest of high school students know they can get into some college no matter how poorly they do."

Recent research suggests that our colleges and universities add some value. But the results of the National Adult Literacy Survey summarized earlier for all adults reveal alarming statistics about the functional abilities of our college graduates. Only 2 to 5 percent of graduates from two-year colleges and 8 to 13 percent of graduates from four-year colleges performed at the highest level on this undemanding test. Even when we look only at those who earned a postgraduate degree or took some postgraduate courses, fewer than one in five scored at the highest level.

On-the-Job Training

Each year American employers spend about \$30 billion on formal training. According to the American Society for Training and Development, \$27 billion was paid by 15,000 companies ca. 0.5 percent of all U.S. employers. Of this group, only 100 to 200 firms, the largest companies with significant professional and managerial staff, spend more than two percent of payroll on formal training. Only about one-third of this \$30 billion is spent on our non-college-educated workers, who compose two-thirds of the workforce. This amount is about 10 percent of total public education expenditures in the United States. Thus almost all our money is focused on the first 15 to 20 years of life, with precious little aimed at the remaining 40 to 50 years of working life in an era when technological change requires that education be treated as a life-long learning process. Perhaps this is not so surprising. Few chief executive officers of Fortune 500 companies come from human resource development backgrounds: 34 percent come from marketing and 25 percent from finance. For technical backgrounds, the story is much the same: only 30 percent of American chief executive officers, compared with 70 percent in Japan and Europe, rose to power via technology-based career tracks.

I recently came across this ad in a newspaper: "Lost a black shaggy dog. Hair falling from left rear haunch. Under medication for hyperactive thyroid. Blind in right eye. Limps badly after being hit by a car . . . Answers to the name Lucky." We will be no more lucky than our fictional dog if, as a nation, we fail to come to grips with the statistics cited here.

III. Adopting Rigorous Academic Standards in Our Schools

In coming decades, the floor on which Americans stand will tilt ever more sharply, and those without real skills will continue their inevitable slide down to seriously-reduced living standards. If our children are to be spared this fate and our democracy preserved, all our citizens must be provided with the requisite lifelines woven of education and skill to keep them standing on firm economic ground. To compete successfully in the new world economy and to provide jobs with wages that will keep most Americans in the

middle class, major changes will have to be made in our system of human capital development.

Let us begin by recognizing that the school system and the human capital development system that helped America and Americans achieve prosperity in a manufacturing era are no longer functional. We need more than workers who are simply socialized to show up on time, respect authority, and repeat monotonous tasks. We need a different school system for a different economy, a school system that produces graduates who are flexible, adaptable, quick learners, and problem solvers. It is not that our schools are worse than before indeed, there is evidence they are marginally better but they are no longer good enough.

The best strategic intervention we can make, one whose impact will be felt through the entire human capital development system, is to establish rigorous academic standards for our K-12 schools and to hold all our students accountable to them. Let us set how high the top of the mountain should be for all our students, and let individual school districts and parents determine how they intend to get their children to the top. The wisdom of this approach was endorsed by the nation's political and business leadership at the National Education Summit, hosted by the IBM Corporation in March, 1996. While a single set of standards would confirm that high school graduates in Pennsylvania, California and Alabama had mastered the same skills, political reality requires that the federal government refrain from setting the standards and imposing them on the states. Given the nation's long tradition of state and local control over the public schools, the standards will have to be developed by the states in partnership with local school boards. The implicit hope of the Governors and corporate leaders who met at the National Education Summit is that the standards ultimately adopted in different parts of the country will share a sufficiently common core to function as voluntary, national standards as opposed to mandatory, federal standards.

One promising intervention is the New Standards project. Funded by the Pew Charitable Trusts and the MacArthur Foundation, it is a grassroots partnership of fourteen states and large school districts that collectively enroll almost half the nation's school children. By focusing only on English, math, science, and applied learning, the New Standards project hopes to avoid battles over values engaged in by left- and right-wing ideologues who derailed work on national history standards. Think of these as the "teflon disciplines" to which ideology has difficulty adhering.

The Standards Movement Involves Major Pedagogical Reform

In general, the standards process involves three steps. First, the content of the standards are set. Working through their national associations, teachers develop standards with input from the business community and benchmark them against the most demanding in the developed world because, in the global economy, our children will compete with well trained young people now being educated in foreign countries. Second, teachers develop curricula, or the course work, that students would need to meet the standards. Finally, performance-based assessments as distinct from aptitude tests are created to measure whether students have in fact mastered the standards.

An extensive set of performance standards, many years in the making, were recently completed for the New Standards project by the University of Pittsburgh's Learning Research and Development Center, directed by psychology professor Lauren Resnick, and the National Center on Education and the Economy, directed by Marc Tucker. These performance standards are now available for lower-, middle-, and upper-schools in English, math, science, and applied learning (see References).

The standards movement, as Dr. Resnick describes it, represents a radical departure in pedagogy. Instead of the ability-based paradigm that currently dominates our thinking about how we learn those who are smart do well and those who are not do poorly the standards movement embraces an effort-based paradigm centered on the belief that effort leads to ability. With effort expended toward mastering a set of explicit standards, all children can reach far higher levels of accomplishment than is currently believed. Because different levels of ability exist, there will always be students who achieve advanced mastery, but through the standards pedagogy which restores the work ethic to schooling the academic floor can be raised significantly for everyone. Instruction toward the standards does not involve learning a narrow set of skills aimed at producing high scores on aptitude tests. What needs to be known is made explicit at the outset and achieved through active performance rather than passive test-taking. How do you win a merit badge in Boy Scouts or Girl Scouts? You learn how to tie varied knots and demonstrate these skills to your Scout master. How do you get a job in an ad agency? You show your prospective employer your portfolio of marketing concepts.

What goes on in the classroom will more closely reflect what goes on in the adult world. Team work becomes far more important than isolated individual effort both because it is a skill greatly needed in the work place and because it is okay to learn together when everyone knows in advance what problem-solving skills must be mastered to meet the standards.

Setting high standards and promoting a pedagogy through which students are genuinely expected to meet them are central to the Children Achieving agenda which Philadelphia School Superintendent David Hornbeck is working to implement. These key reform issues have been largely absent from the public debate and are especially relevant in an environment where some people believe inner-city children are incapable of high achievement.

Significant equity issues exist: is it fair to expect students in inner-city conditions to meet the same standards as children attending middle-class schools without first providing equal resources to improve their classrooms and their neighborhoods? To be sure, the battle for equitable school funding must continue. But bear in mind that the interests of these children are clearly not served by the status quo, and they can be addressed, at least in part, despite all the socioeconomic difficulties that compound the learning process in inner-city schools, through the standards approach to education. It is certainly more honest and ultimately more effective to preserve the same high, real world standards for all students and vary the time allowed to meet them.

As argued above, the need to embrace the standards movement is essential as well in suburban school districts across the region. Given the human capital requirements of the twenty-first century economy, there should be no comfort taken from comparisons that find suburban schools superior to city schools. The large majority of our suburban school students must also be challenged to raise significantly their levels of academic achievement if they are to hold the highly skilled jobs of the future and be the equal of their counterparts elsewhere in the developed world.

Over time, high school must become consequential. Right now the only students who work hard in high school are those who want to attend our elite colleges and universities. This must change. The floor has to be raised substantially for all students, and standards can do this. We can hold our first high school graduating class accountable to high standards in seven to ten years from now, all the while explaining that consequences are attached to their effort. Initially these will be positive. Some school districts, for example, are now partnering with employers, colleges and vocational training centers to guarantee jobs and enrollment for high school graduates who meet the standards. But at an agreed upon point in the future, if students fail to meet these standards, there should be negative consequences as well: employers must agree not to hire these students, colleges must determine not to admit them, and post-secondary training programs must resolve not to enroll them.

Building Broad-Based Community Support for Academic Standards

This will require a dramatic shift in the attitudes and behavior of parents, employers, elected officials, and college administrators not simply students and educators. The standards movement can succeed only if support comes from every constituency in our communities. Having the support of Governors and corporate leaders is necessary, but not sufficient. As these political and business leaders clearly recognized, the "top-down" initiative represented by the National Education Summit must now be matched across the country by a "bottoms-up" effort.

The Center for Greater Philadelphia at the University of Pennsylvania has launched a grass-roots initiative known as New Standards in Education. Working with local Chambers of Commerce and Rotary Clubs, it hopes to catalyze the formation of local coalitions of business and civic leaders and educators across Southeastern Pennsylvania's 62 school districts to support the adoption of rigorous academic standards. The project's Advisory Board is chaired by Thomas Donovan, recently retired Chairman of Mellon PSFS.

Although many professional educators see the standards movement as a fad, yet another gimmick to fix the schools such as "open classrooms" and the "new math," they could not be more wrong. Nor is the standards movement an effort to turn public schools into vocational schools. "We [business] can teach [students] how to be marketing people. We can teach them how to manage balance sheets," said Louis V. Gerstner, Jr., IBM's CEO and host of the National Education Summit. "What is killing us is having to teach them to read and to compute and to communicate and to think."

Finally, the human capital development challenge is not one among many rather, it is the greatest challenge facing America. Creating a future labor force that can compete successfully in the twenty-first century global economy is at times an intimidating and overwhelming task because key changes must occur in every component of the nation's human capital development system. Yet we can succeed provided that we admit the nature of the crisis, recognize that a generation's effort lies ahead, and get to work now. This determination will take us into the next millennium secure in the future of our economy, assured in the quality-of-life we will bequeath to our children, and confident in the capacity of our democracy to endure.

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