

EDUCATION

The foundation of the state is the education of its youth.

Diogenes

ABSTRACT

Education is vital to a flourishing democracy—the cornerstone for active, involved citizenship. In a rapidly changing and increasingly competitive world, the economic advantage will belong to the nation that has the most adaptive, creative, and ingenious people. To garner this advantage for the United States, we must ensure a rigorous, high-quality education for all youth, and access to meaningful life-long learning opportunities for other citizens. Only by improving the synergy between our schools, higher education institutions, communities, businesses, and government can we harness the full diversity and energy of our citizens and meet the challenges of a changing economy and global industrial requirements. This transformation is a challenge for the education industry and for the entire nation.

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PLACES VISITED

Domestic

Fairfax County Public Schools, Fairfax, Virginia
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University of Maryland, College Park, Maryland
Maryland State Department of Education, Baltimore, Maryland
District of Columbia Public Schools, Washington, DC
General Motors-United Auto Workers Training Facility, Pontiac,
Michigan
Project Focus Hope, Detroit, Michigan
Educational Testing Service, Princeton, New Jersey
Carnegie Foundation, Princeton, New Jersey
Boston Renaissance School, Boston, Massachusetts
Chelsea Public Schools, Chelsea, Massachusetts
BBN Inc., Cambridge, Massachusetts
Kennedy School of Government, Cambridge, Massachusetts
Harvard Graduate School of Education, Cambridge, MA
Northern Essex Community College, Haverhill, Massachusetts
McDonough City Magnet School, Lowell, Massachusetts
Minuteman Technical High School, Lexington, Massachusetts
John Hancock Financial Services, Boston, Massachusetts
Motorola University East, Mansfield, Massachusetts
Dr. Theodore Sizer, Coalition of Essential Schools

International

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US Embassy Labor Councilor, American Embassy, London, England
London School of Economics, London, England
School Curriculum Assessment Authority, London, England
Enfield School, Enfield, England
Paris Learning Center, Paris, France
Department of Education, Paris, France
Organization of Economic Cooperation and Development, Paris,
France
Industrial College, Schorndorf, Germany
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INTRODUCTION

Our nation's most precious resource is its people. Their knowledge and skills, intellect and productivity, contribute to maintaining our status as the world's only current superpower. Over the years, education played a central role in the United States's hold on a position of world leadership. As Hedrick Smith observes in his book *Rethinking America*, "A country's performance in the global game . . . begins in the mind-sets of its people — how people are taught to think, to deal with one another, to work together. In other words, the race begins in school" (Smith, 1995, p. 98).

To assess whether our educational systems are successfully producing citizens with these attributes, we began by listening to and questioning an impressive array of expert practitioners, consultants, and social critics. This disparate group represented the full range of opinions from "the sky is falling" to "if it ain't broke, don't fix it." Next we sought to discover the linkages and commonalties between our own preconceptions and what we were learning. Hypotheses and prescriptions began to emerge. Eagerly, we began visiting real schools and workplaces in the United States and Europe; we talked with students, teachers, administrators, and trainers to test our ideas against the realities in which 60 million Americans engage in education on a daily basis.

Much of what we saw was thrilling. Pockets of genuine excellence exist, where real heroes work miracles on a daily basis with less than optimal resources. We began to look for ways to transplant these successes into the many schools in our nation that are failing or doing less than their best. It quickly became clear that, given the incredible diversity of America, the best solutions will come from community-based institutions and leaders who understand their local communities and the educational services they need.

We are convinced that real links are needed between schools and the larger society. Both are successful when they interact as a seamless whole, providing classroom and lifelong learning opportunities tailored to the needs of the community and the strength of the nation. Our analysis proceeded from that perspective; our recommendations reflect that belief.

THE EDUCATION INDUSTRY DEFINED

A broad range of societal institutions are part of the education industry. They all fit, however, into one of three categories that provide a convenient framework for descriptive data and observations about the status of education in 1997.

Elementary and Secondary Schools

In 1996, approximately 50.7 million students enrolled in America's public and private schools at a total cost of \$308 billion, for a per-pupil cost of \$6,084. Enrollment is expected to grow to 55.9 million by 2005, an increase of over 10 percent. Public schools educate nearly 90 percent of this total, a proportion that is expected to remain stable.

Public school students are served by approximately 140,000 schools employing over 2.8 million teachers and operated by over 15,000 local school boards with varying degrees of authority and autonomy, depending on the state. The configuration of the schools is endlessly varied. A popular pattern is to house kindergarten through fifth grade in elementary schools, sixth through eighth grades in middle schools, and ninth through twelfth grades in high schools. Variations from this pattern are based as much on space limitations and geography as on educational philosophy.

School districts also come in different shapes and sizes. In some states, they are organized at the county level; in others, at the community level. In some, they oversee all levels from K-12; in others, K-8 and 9-12 are separate districts — often with overlapping boundaries. Their student populations also vary greatly, from 1.1 million in New York City to districts in rural areas that educate fewer than 500 students.

This variety is simultaneously a strength and a weakness. It makes delivering a coherent, rigorous education throughout the nation difficult. The key problem is that each district may focus on different content and outcomes, depending on local politics, demographics, finances, job markets, and community values. The resulting diverse and uncoordinated curricula make it difficult for students to transfer between districts and for policymakers who want to compare the results across district or state lines.

Transitional Institutions

Transitional institutions are similarly diverse and encompass a multitude of school-to-work programs. They are located in secondary schools, or they may be apprenticeship programs, school or business training partnerships. Community and technical colleges, private vocational and proprietary schools, and traditional college and university programs also serve as transitional institutions. In total, over \$200 billion are spent on these enterprises annually.

This segment supports retraining programs for workers in transition to a new career, whether voluntarily or due to corporate restructuring. The quality and availability of these programs and services concerns businesses, individuals, and public policymakers who can see that the twin forces of a globalizing marketplace and rapid technological innovation will force workers to make several job changes during their working lives. The ability of educational institutions to respond and adapt to this need for retraining will largely determine our position in the world economy. Historically, our European allies have done a much better job in training their noncollege bound youth. Yet current economic conditions require that they too, review their training programs for cost efficiencies, affordability to employers, and adaptability to the needs of a changing work force.

The Workplace

The third sector of the educational industry includes the whole range of employee training available in the workplace. Corporate spending on formal employee training totaled over \$40 billion last year. Formal training consists of professional development courses, skill-building courses, and seminars. In addition, a significant amount of informal on-the-job training happens in the workplace. Its cost is difficult to calculate but is thought to be even higher.

Many large corporations here and abroad run their own training centers, and an extensive, highly competitive training industry has developed to service smaller companies. Several companies contract with community and technical colleges to develop specific programs for their needs. The workplace sector is marked by flexible, rapid adaptation to changing market needs — more so than the schools.

CURRENT CONDITIONS

Because the educational industry contributes best to the strength of our nation and its citizens when all its sectors are coordinated and linked, we evaluated the health of the industry by considering its overall success with certain critical issues.

The United States is a large and diverse country with a tradition of local initiatives and a distrust of “one size fits all” approaches. Consequently, it is not surprising that the effectiveness of the delivery of educational services varies widely. The energy and innovation that spring from such diversity are key components of the nation’s strength. They also provide multiple ways to measure the current health of our educational systems.

To concentrate on what we believe are the key requirements of an educational system that can preserve and extend national strength, we chose six indicators. That is, we hypothesized that the industry is successful if it contributes to

- social cohesion and civility;
- provides universal access to a quality education for all students;
- imparts a rigorous curriculum with measurable results;
- offers a world-class education to both college and work-bound students;
- results in a competent, adaptable work force; and
- promotes partnerships among education, community, and business interests for life-long learning.

Maintenance of Social Cohesion and Civility

Most observers agree that the social fabric is seriously frayed. The appalling state of urban education has relegated large segments of America to a hopeless future outside the economic and civic mainstream. The gap between the “haves” and “have nots” is widening. Even college professors are experiencing a lack of civility in their classrooms.

Others have commented on the absence of effective civic and character education in our schools today. For example, the authors of *Winning the Brain Race* state, “We are producing a generation of young Americans that neither understands nor appreciates our democratic society” (Gerstner, et al., 1991). In France, a primary function of the educational system is to prepare good citizens who understand and appreciate the very essence of what it means to be French. Few can

disagree on the value added to society when children learn and demonstrate virtues such as honesty, integrity, responsibility, and respect for self and others. One of the greatest concerns of over 80 percent of employers is their inability to find young people with these characteristics to hire! Schools must be actively involved in the effort to preserve and shape our civil society, but the primary responsibility remains with parents. Schools should buttress and encourage the training in essential values, character, and civility that students receive at home and in local communities.

Universal Access to a Quality Education

The growing enrollments foreseen in public schools through the next decade will increase pressure on already straining budgets at the federal, state, and local levels. Currently, the federal government pays just 7 percent of the costs of public elementary and secondary education; states pay 48 percent, and localities pick up the remaining 45 percent. The amount paid at the state level varies greatly, however, from a high of almost 98 percent in Hawaii to a low of only 9 percent in New Hampshire. This wide range reflects differing philosophies among the states regarding the proper role for each level of government in managing public education. States in which the local governments shoulder the largest burden for funding public schools generally have the widest disparities in per-pupil expenditures and in the quality of programs and facilities offered. The trend since 1986 has been for states funding to decline and local funding to increase, with no change in the federal share. Inequities based on community wealth have increased accordingly. The result is that rural and urban schools are generally inferior to suburban ones, compounding the “haves” and “have nots” issue.

By contrast, school funding in Europe is centralized at the national or state level to minimize disparities. Spending decisions, however, are made locally; individual schools often prepare their own budgets reflecting their own priorities and needs. This model of local autonomy combined with state funding is worthy of emulation in the United States.

Since nearly all American colleges and universities charge tuition, problems of access are based primarily on the individual’s ability to pay. For the 1994-1995 academic year, annual undergraduate charges for tuition, room, and board were roughly \$5,962 at public colleges or \$16,222 at private colleges. These figures represent inflation-adjusted increases over ten years of 23 percent at public and 39 percent at private

colleges. Scholarships and aid programs mitigate the problem somewhat. Scholarships have grown rapidly during the past decade, up from 9 to 14 percent of general expenditures at private institutions. Aid programs (Pell Grants, work-study programs, and various privately funded schemes) provide more than half of all full-time students with an average of \$5,543, a substantial portion of tuition costs. It is worth noting that European nations that have traditionally provided a free higher education for their citizens are now considering the imposition of American-style fees.

A Rigorous Curriculum with Measurable Results

The competence of elementary and secondary school graduates can be hard to gauge. Nevertheless, current U.S. students are among the most tested students in the world, so it is not hard to prove almost anything positive or negative about their education. Long-term trends in reading achievement show improvement for many of the country's thirteen- and seventeen-year-olds and for some groups of nine-year-olds. However, much of the improvement made prior to 1988 has not continued among minority students, and some of it was actually reversed between 1988 and 1992. Students at all levels appear to have improved in basic computational skills, but older students show no improvement in advanced operations.

Extensive and well-publicized concern over student performance has caused several states to order additional mandatory academic courses at the secondary level and to make the passing of rigorous tests a condition for graduation, as is common in European schools. Other states are in the process of implementing similar standards. The tests and the degree of difficulty vary widely. In an attempt to bring some order to the standards, President Clinton has called for development of national tests to be used at the discretion of the states.

World-class Education for College and Work-bound Students

American secondary schools are structured to prepare graduates for college. The move toward more rigorous standards strengthens this tradition; it is no longer unusual for schools to require four years of English, math, science, social sciences, and three years of a foreign language. This course of study is decidedly more demanding than was the case as recently as five years ago, and it is an accelerating trend across the country.

This situation is not without its irony. Noncollege-bound students have historically been relegated to the high school sidelines; the focus on college preparatory courses will only deepen this alienation. Yet jobs in the 21st century are less likely to require a traditional college education than some other form of postsecondary training. Better communication between educators, policymakers, and employers is needed if schools are to provide a relevant education for the noncollege-bound. We have much to learn from the German apprenticeship system that does so well in preparing its students for meaningful work. The United States also has some excellent programs that are worthy of replication.

Provision of a Competent, Adaptable Work Force

Companies here and in Europe are making it clear that workers of the future will need a solid grasp of basic academic and cognitive thinking skills and the ability for complex problem solving. They will also need interpersonal skills and the ability to work in teams. In response to these needs, good schools are adapting their teaching strategies to develop these skills. More can be done, however. Most schools are still based on the active teacher/passive student model. Teachers themselves need extensive, focused, professional-development programs to learn how to align their methods with the needs of the workplace.

Education/Community/Business Partnerships for Lifelong Learning

Communications technology and rapid innovation are causing major changes in the marketplace. Globalization is here to stay. The traditional loyalties between worker and company are changing. Even in European nations with a tradition of lifetime employment with one company, the concept of a lifelong career is threatened. Workers must continually upgrade their skills to remain relevant, employable, and competitive in a global work force. In the United States, the institution that will bear the heaviest burden in this endeavor is likely to be the community college. The average age of its students is increasing as displaced workers return to learn new skills. More than one-half of all undergraduate students are twenty-two years old, and almost a quarter are thirty or older, fundamentally changing the colleges' mission. The best of these schools are forming partnerships with local employers to design specific training for the kinds of jobs being created. As the number of traditional college-age students has decreased, these institutions have expanded their

mission in order to survive. As a result, these colleges have reformed further and faster than any other type of educational institution.

CHALLENGES AND OUTLOOK

If the United States is to realize the relevant, universally accessible, world-class lifelong educational experience that we think is essential for the well-being of the nation, the industry has its work cut out — and many challenges.

Maintaining Social Cohesion and Restoring Civility

The widening gap between the “haves” and “have nots” has been well documented, and new evidence suggests that the gap between white and black is widening again. The Kerner Commission warned almost thirty years ago that “we are in danger of becoming two nations; one black, one white; separate and unequal.” In April 1997, the Harvard Graduate School of Education reported that “the nation is headed backwards to a greater segregation of black students.” A substantial growth in the size of other unassimilated minority groups is also evident and inequities in the quality of education are exacerbating the problem. The same Harvard report shows that Hispanics “now experience more isolation from whites and more concentration in high-poverty schools than any other group of students.” Moreover, “school educational achievement scores in many states and in the nation show a very strong correlation between poverty concentrations and low achievement.” Bridging this gap is essential for the well-being and strength of the United States.

Education’s role as the key predictor for success and earning power throughout life is critical in this endeavor. It is important that all individuals have equal access to the school of their choice. Complementing the roles of parents and community, schools should provide the common social experience in which practical citizenship can be taught. Within reason, schools must teach civic responsibility and acceptable social behavior. Extensive use of magnet schools and experiments in allowing children to attend the public school of their choice in or out of their district are among reforms offering some solutions. Carefully constructed charter schools hold great promise for achieving a more common experience and a reversal of the disturbing

trend toward greater racial and economic isolation. We must ensure public schools are accessible to all.

Assuring a Quality Program

In all of our visits to schools both in the United States and abroad, the common thread in all excellent programs was the quality of the teachers. Although it has served us well historically, our teacher-preparation model is showing signs of severe strain. Women, education's traditional labor pool, now have other, often more attractive and remunerative choices. In addition, given the swelling enrollments in our schools and the imminent retirement of record numbers of teachers, the nation will need to recruit two million new teachers at the elementary and secondary levels over the next decade.

The industry must attract appropriate replacements to assure a quality education for all. There are few incentives beyond altruism to become or remain a teacher today. In fact, fully 50 percent of new teachers leave the profession within three years. Though studies show that the factors most contributing to teacher commitment are classroom autonomy in teaching techniques, influence over policy, quality of assistance to new hires, and a large spread between entry-level and end-of-career salaries, these elements are in short supply in today's public schools. Issues such as establishment of professional performance criteria, stringent hiring requirements, and periodic consequential assessment of performance are and should remain valid concerns for school boards. However, issues that bolster teacher commitment and identity as professionals are of greater long-term benefit to students.

After twelve to fifteen years of teaching, American teachers reach their maximum salary, typically earning twice what they made at the beginning of their careers. Few professionals in other industries would maintain their enthusiasm and commitment if faced with salary stagnation for the last fifteen to twenty-five years of their careers. We must find a way to reward teachers' performance throughout their careers. They should also experience the significant salary growth that is common in other professions and among teachers in many other nations.

Like other workers in this era, teachers in the United States need extensive opportunities for professional growth and development to help them meet the fast-changing needs of their students and businesses. But the way our schools are now structured hinders their opportunities. Teachers seldom have the opportunity to observe the best practices of their colleagues down the corridor because they are locked in the

isolation of their own classrooms. Opportunities to visit other schools, attend conferences in their subject area, or spend time collaborating with and learning from local businesses or community institutions are rare. Our teachers spend more time with students than their counterparts in most other nations. Most of our international competitors have a much more autonomous, professionalized, and well-paid teaching force. Failure to reform these practices will exacerbate the present difficulty in attracting the best and brightest to the teaching profession. One consequence of our inability to attract highly skilled professionals is that fully 30 percent of current secondary math and science teachers are not certified in their area of responsibility.

Another impediment to effective schools is the stultification and rigidity that our bureaucratic model for public education engenders. We are the only nation in which teachers make up less than half the employees in the typical school system. The heavy bureaucracy surrounding the myriad of school-related administrative functions hampers creative, effective, unfettered teaching by empowered, accountable professionals. This morass causes schools to lose sight of their true purpose and vision.

Formulating and articulating such a vision was a common thread of excellency in the schools that we visited here and abroad. Teachers, students, parents, and members of the broader community know the goals and are actively and collaboratively involved in them. Thus, successful schools do increase autonomy and accountability at the local school level. They either figure out how to work around their bureaucracies or how to leave them behind. Examples of the latter are “grant-maintained schools” in the United Kingdom and magnet charter schools in the United States; their existence should be encouraged. We believe that these types of institutions will grow substantially in number over the next decade, and we applaud this trend.

This development reflects the growing consensus that having a choice of schools is good for families who must then commit to a particular program. Such parents are more likely to become involved in their child’s education. The competition between schools that results from choice is also a good antidote to the bureaucratic tendencies previously discussed. Diversity and decentralization are essential for responsive educational reform. School choice is the ally of the dynamic educator.

However, a word of caution: these programs should be part of the solution, not an exacerbation of racial and economic isolation. Families must not be allowed to use school choice as a mechanism to avoid

mixing with other economic or racial groups. Public officials and local citizens should remain vigilant to prevent such occurrences or perceptions.

While our colleges and universities are generally considered the best in the world, a disturbing trend developed over the last two decades. Institutions are relying more on part-time or adjunct professors and graduate students to avoid the costs of benefits and tenure — and to ensure that professors are free for research. This practice creates less stable college faculties, and a blurred sense of identity with the institution. As a result, many undergraduate students receive *no* classes from the either full-time or tenured faculty whose renown may well have contributed to their choice of this school in the first place.

A recent study by the Carnegie Foundation for the Advancement of Teaching proposes restructuring the reward system for college faculty to encourage them to see the teaching of undergraduates as a key part of their professional duties and to make their research of practical use to the communities they serve (Carnegie Foundation, 1997). We hope that this idea will spread quickly among all colleges and universities. It is in the nation's interest that its future leaders have a challenging, rigorous college education and access to renowned researchers.

Assessing Mastery of the Curriculum

Much has been written about the declining quality of U.S. students compared to their international counterparts. The truth is considerably more complicated. The majority of middle-class students receive a good, solid education, as long-term trends in SAT tests have shown. These students also do well on the new standards-based tests now in use in several states, and they are also likely to survive the current push to require “hard” academic courses in high schools at the expense of “soft” electives. In short, most assessment devices play to the curriculum of these suburban, largely college-bound students.

But imposing rigorous assessment measures on failing urban schools will not make them succeed. Without additional resources, better teachers, and a radical overhaul of school operations and relations with the broader community, we risk the danger that students will be set up for failure and for dropping out in even larger numbers. The industry — and policymakers — must ensure that higher standards are accompanied by the resources necessary to make them realistically achievable.

Educating the Non-college-bound

Our elementary and secondary schools are clearly geared to serve the college-bound student — more so than in any other industrialized nation. We could learn much from the apprenticeship programs that Germany uses to prepare its students for the workplace. A technical secondary school in the town of Schorndorf is an excellent example of this apprenticeship system. The school relies heavily on local businesses for up-to-date equipment on which to train its students, and clearly focuses on the particular trades in the region in which its graduates will be employed. In too many parts of America, students receive substandard instruction on outmoded equipment no longer used in industry or, worse yet, instruction for a trade in which jobs are declining or even disappearing altogether. This area of U.S. secondary education requires a major overhaul.

Fortunately, we do have domestic models from which to learn: Project Focus Hope in Detroit, Michigan; and the Minuteman Technical High School in Lexington, Massachusetts. Serving very different communities and clients, these schools provide training uniquely suited to the needs of their communities.

Project Focus Hope is part factory, part college, part vocational training center, food bank, child-care center and Montessori school. Built on the site of the 1967 riots, it was founded to train skilled workers for the manufacturing economy of Detroit. Through hard work, inspirational leadership, and partnerships with local companies, its strategy has been to tailor a training program to specific market needs. Project Focus Hope offers rigorous training on state-of-the-art equipment that replicates actual work situations. The product is the report card. For students not academically or attitudinally prepared, a seven-month preparatory program is required during which they must adhere to a rigid schedule of remedial education in math, computer courses, and workplace training. Project Focus Hope has a 90 percent placement rate for its graduates. While many unique factors contribute to the success of this private-sector program that may not work in public schools, the key components can be replicated: strong partnerships with local businesses and a straightforward program to train students in exactly the skills demanded by the market.

The Minuteman Technical High School is a public magnet school that has many of the same ingredients. Its students receive a solid academic preparation for college (with an emphasis on math and science) and firm, practical grounding in a “shop,” such as robotics,

biotechnology, laser technology, electronics, structural engineering, veterinary science, auto mechanics, applied physics, or culinary science. Many of Minuteman's teachers are on loan from local companies. The school accepts all manner of students, gives them a rigorous program grounded in real workplace needs, and keeps open lines of communication with local employers. The program is replicable by energetic educators and communities with a vision and commitment to providing the best for all students.

The Minuteman model may not be right for every student, but all students ought to have such an option available to them. Project Focus Hope may not be the answer for every inner-city adolescent, but other cities would benefit by setting up programs closely linked to their local economies. These are the "best practices" we saw in U.S. education; the challenge is to create similar programs in other cities and towns.

Providing the Right Skills for a New Economy

Employers want workers who can get along with colleagues and who have the interpersonal skills to work in teams. As restructuring leads to fewer layers of management, more workers are empowered to make decisions in a team setting. This practice requires schools to rethink how they instruct students. The traditional "teacher talk, student listen" didactic model will not adequately prepare students for the level of interactive teamwork expected in the modern workplace. School districts and colleges need to train teachers to deliver instruction through collaborative activities. Good schools are changing their teaching methods to incorporate the latest research on the various styles by which students learn.

Employers want workers who can think creatively, solve complex problems, and learn quickly. The ability to find information and rapidly assimilate new processes is more important than simple knowledge. Good schools realize that the knowledge explosion makes it impossible to teach students all the facts about any subject. The influence of the Internet and its plethora of information makes teaching students how to sift and access information that is relevant to specific needs, and how to use that information to make informed decisions more crucial than ever.

The challenge for educators is to blend the employers' needs with the state policymakers' insistence on fact-centered standardized tests of student performance. The challenge for policymakers is to devise assessment measures that prove student competence based on academic achievement and actual skills needed in the workplace. Eventually this

challenge will be met as everyone begins to realize the importance of schools working closely with employers to guarantee national competitiveness. Local school and industry partnerships can contribute to overcoming this challenge.

Institutionalizing Lifelong Learning

Maintaining a cutting edge, quality work force in a highly competitive world requires frequent employee retraining with emphasis on technological innovations, higher-order problem-solving, interpersonal skills, teamwork, and flexible thinking. A commitment to life-long learning will be the hallmark of successful individuals, businesses, and nations. From an early age, parents and schools will need to ensure that children are comfortable with change and adept at meeting it positively and with confidence.

Our institutions will have to change to make lifelong learning available and relevant to all citizens. Fortunately, much of higher education is already grappling with ways to transform what is taught and to whom it is delivered. Since adult education is a major component of lifelong learning, these institutions can make a major contribution. Some of them, for example, Northern Essex Community College in Massachusetts, are forming strong partnerships with significant employers in their communities to design flexible courses tailored specifically to the needs and schedules of their companies. Some are part of a consortium of similar colleges formed to avoid duplication, act as an incubator for new ideas, and break new ground in the delivery of relevant, just-in-time knowledge. Extensive use of computer technology and distance or off-campus learning (and their promise of individualization and resource savings) will likely be hallmarks of other successful programs.

Lifelong learning will mandate a reevaluation of the traditional credentials that are a part of our system of education. A college degree no longer signifies possession of a body of knowledge that will carry its bearer through the rest of life. It is, rather, a marker, albeit a significant one, along the route of continual learning and education. We will have to devise new commonly understood credentials to signify other markers. The new ones will evolve from the joint efforts of industry, unions, educational institutions, and other individuals. These issues have already generated much discourse and experimentation, but the real transformation lies ahead.

GOVERNMENT GOALS AND ROLES

Functions of government are not neatly divisible between the federal, state, and local levels. All three play key roles in education. States and local governments share the responsibility for elementary and secondary school funding, curricula, and results. Decentralization best meets the diverse needs of the United States where rugged individualism, personal freedom (choice), and an entrepreneurial spirit are distinguishing characteristics. Each level of government makes policy, regulates legislation, collects and disseminates information, and funds public responsibilities.

An Intermediary for Quality

Six strategic issues in education require timely, balanced government intervention.

Citizenship. One of the primary goals of education is to attain full democratic participation by the citizenry. Socialization and issues of civility reinforce values, community involvement, cultural awareness, tolerance, and societal norms. The Summit on America's Future was a good start. This conference focused on volunteerism and called for every student to have an ongoing relationship with a caring adult (parent or mentor), a safe place to go and structured activities to do during nonschool hours, a healthy start as a youth, marketable skills gained through effective education, and an opportunity to give back through community service.

Global Competitiveness. A return to choice, equity, cognitive skills, and high standards of achievement is necessary to prepare our primary and secondary students for the lifelong learning needed to succeed in a technically oriented workplace. "Our public education," says Dr. Ted Sizer, "is not really very public" (Sizer, 1992). One can, for example, live anywhere in metropolitan Washington and use any public park or form of public transportation, but one cannot choose attendance at any public school. Because of the way local taxes are used to finance schools, the best schools serve the wealthy. Approximately 70 percent of the population attend lesser neighborhood institutions that perpetuate lower national capabilities through a growing divide between the "haves" and "have nots."

Standards and Assessments. Education is a local responsibility, a state function, and a national concern. Therefore standards and assessments are needed for schools, teachers, and students. We must avoid the risks associated with too much centralized control: piecemeal change with little coherence, excess direction and limited local initiative. The federal government should provide strategy, direction, and help to state and local governments. National goals, instructional content, performance standards, and assessment models provide an azimuth for state and local governments to adopt or modify, based on local needs.

Failure of Urban School Systems. School systems in Washington D.C.; Los Angeles, California; Baltimore, Maryland; and Boston, Massachusetts are failing. Urban dropout rates are higher than the national average (in some cases 60 percent). The earning power of dropouts is one-third that of a high school graduate, and one-sixth that of a college graduate; and additional social programs cost taxpayers \$52 billion annually. Left untreated, megacities will become epicenters for a racial and economic rending of our national social fabric. Urban schools must become relevant to their constituents.

Inequities in the Education of Blacks and Hispanics. Nearly one-third of all twenty- to twenty-nine-year-old black men are in prison or on probation or parole. Nearly two-thirds of state prison inmates are high school dropouts. Hispanics now have the highest rate in dropout statistics — about 30 percent nationally. The urban poor do not have access to educational programs that would make them competitive workers. The history of unaddressed inequities and educational disenfranchisement is in stark contradiction to the basic tenets of the U.S. Constitution and an incredible waste of intellectual capital with debilitating social costs.

Inadequate Vocational Technical Education and Training. Many people are frustrated by education's failure to provide workers with the cognitive, interpersonal (team), and technical skills required in today's rapidly changing job market. Louis Gerstner, Jr., chief executive officer of IBM: "If we don't shape up our schools, we will soon be a Third World economy" (Gerstner, et al., 1995). School-to-work transition programs must attain parity with a four-year college education and meet the demands of the workplace. The German apprenticeship system, and the few domestic examples previously discussed, lead us to conclude

that improved vocational/technical high schools and community colleges can provide the necessary training and retraining.

RECOMMENDATIONS

Federal Government

Rather than exercising centralized control and prescribing standards, the federal government should set national goals, use national grants to pioneer help for high-risk or failing systems and groups, assess effectiveness for continuing and follow-on program work, and encourage decentralized control and local initiative. Consideration should be given to combining the efforts of the Department of Education and the Department of Labor to coordinate funds and programs and to focus efforts on enhanced technical and vocational training geared to the needs of the workplace. The “bully pulpit” should focus national attention on the part of education that is broken. Legislation should be enacted only if states do not take appropriate action on strategic issues.

State Government

States should set equity requirements and standards, and decentralize curriculum establishment and spending authority. State boards of education and legislatures should mandate the use of a state-level tax as the primary source for public school funding. These funds should be distributed according to a formula responsive to enrollment and special needs, thus ensuring equity in access and a quality education for all.

Local Government

Building coalitions with schools and industry, local governments should leverage local human resources and civic/commercial assets to increase equity while reducing expense. Individual contribution through civic involvement will increase a sense of community and promote social cohesion. Decentralizing curriculum development and spending authority, while holding individual institutions accountable for attaining standards, will optimize opportunities for community initiatives.

CONCLUSION

Education is the key to this nation's industrial success and national power. It enhances our quality of life, domestic tranquillity, and global competitiveness. The quality and success of the education industry is directly related to our esteem for learning. Good students possess a strong desire to learn, and good schools possess a strong and dynamic ethos of learning. They are led by people excited about education and driven by their belief in the education of all as a family. They are supported by a community steeped in the same ethos.

The incredible vitality, richness, and diversity of the United States calls for the same diversity in educational and training settings. In education, one size does not fit all. The education industry is most successful when it is seamlessly linked to communities, businesses, and families with a strong ethos of learning, and a commitment that others will have the same opportunity. Only such an educational environment will produce a responsible and productive citizenry who will continue their personal growth and encourage lifelong learning for all.