EDUCATION IN THE UNITED STATES
CONTINUITY AND CHANGE
The greatest challenge America faces to realizing our entire vision is the challenge of giving every child in this country a world-class education.... This means first, not only high standards, but high expectations and high levels of accountability of students, parents, schools, and teachers and communities....

If we don’t do it now, how can we preserve the American Dream for people who are responsible enough to work for it?...Meeting the challenge will not be easy. There is no quick fix; there is no single proposal that will magically give all our children the education that they need and deserve.... Ultimately, the magic of education is what goes on in the class, between the teachers and the students — hopefully, supported at home by the parents.

— President Bill Clinton

The American system of education, like the society that shapes it, is facing myriad challenges and opportunities. What is the role of technology in the classroom? Is there a place for voucher-funded schools? Can national standards and testing be mandated for schools which are locally controlled? At a time when education is of increasing importance, where does society find the resources to fund this expanding need?

At the same time it is facing these questions, the U.S. system of education remains committed to universal access to education for all its students. It also has long contributed to its citizens’ economic upward mobility and exerted a powerful democratizing influence. Despite the challenges facing American education, and the continuing debate among politicians, educators, parents and students, there is a national consensus that, as President Clinton reminds us, high quality education must be accessible to all.
FOCUS

FOUNDATION OF A NATION — STRONG AND EFFECTIVE SCHOOLS
By Richard W. Riley
The U.S. Secretary of Education discusses the philosophy and underpinnings of various Clinton Administration initiatives, and the importance of a strong educational structure as a major component of a vibrant nation.

COMMENTARY

EDUCATION IN THE UNITED STATES — A STATISTICAL SNAPSHOT
Produced by Journal Editors
Numbers almost never tell the whole story, but they do help to appreciate the size of the enterprise. This brief selection demonstrates the scope of education in the United States and gives some sense of the resources involved.

U.S. HIGHER EDUCATION IN THE POSTWAR ERA: EXPANSION AND GROWTH
By Theodore J. Marchese
In the five decades since World War II, the United States has rebuilt and greatly expanded its system of higher education. Educational opportunity has become more open and accessible, fairer and more relevant. Higher education is now seen as an indispensable investment in creating a knowledgeable workforce, producing broad national benefits and increased personal fulfillment for our citizens. Following this article is a brief consideration of The Essence of the Educated Person. A third piece briefly outlines The Accreditation Process by non-governmental peer bodies for higher education and by state and local authorities for primary and secondary education.

PUBLIC RESPONSIBILITY / PRIVATE INITIATIVE: PRIMARY AND SECONDARY EDUCATION IN THE UNITED STATES
An interview with Dr. Michael Usdan
The president of the Institute for Educational Leadership — a nonprofit organization reflecting the concerns of business and education — discusses issues and trends in primary and secondary education in the United States: Is America’s historic commitment to mass public education appropriate in its current form? How good or bad are our public schools? What are the prospects of experiments to improve public schooling? Following the interview, Journal editors review some of the concerns about educational quality in Grading U.S. Education Today.
THE COMMUNITY AND THE CLASSROOM
By Denis P. Doyle

This article explains the basic structure of the U.S. educational system, including the limits on the federal government’s Department of Education, the importance of “local control” of community schools and the recent emergence of the “excellence” movement.

RELEARNING EDUCATION IN THE AGE OF TECHNOLOGY
An interview with Dr. Barbara Means and Dr. Seymour Papert

Two renowned experts in innovative uses of technology in education, Dr. Barbara Means of SRI International and Dr. Seymour Papert of the Massachusetts Institute of Technology, discuss the impact of technology on our systems of learning.

VOICES IN EDUCATION
Prepared by Charlotte Astor

The subject of education, which has shaped our society and is shaped by it, continues to inspire lively discussion and sometimes contentious debate. Here, we present comments from a broad range of participants in the current educational dialogue.

ARTICLE ALERT

BIBLIOGRAPHY
SELECTED BOOKS, ARTICLES AND INTERNET SITES
When the United States was created more than two centuries ago, one of the core concepts on which the hopes for the new democracy were pinned was the ideal that its citizens would be enlightened individuals with clearly articulated rights and the opportunity for individual achievement and education. Thomas Jefferson and others believed firmly that progress of the human mind was as important as, and had to coexist with, progress of the human spirit. They understood, as we do now, that in a free nation where the power belongs to the people, the commitment to education defines the progress of that democracy and is the catalyst for future progress.

Two centuries later, it is clear this core value has not only stood the test of time but also has grown in importance. As we move forward in this new Information Era and international economy, education is an increasingly vital commodity, a precursor of potential success and a driving force of change. It is important to recognize, however, that we approach education today differently than in the past. School and work used to be distinct worlds, in part because the kinds of jobs people had didn’t require the kind of basic education and specialized training often required in the workforce today. In the 1950s for instance, only 20 percent of American jobs were classified as professional, 20 percent as skilled, and 60 percent were unskilled.

Today, our world has changed. The proportion of unskilled jobs has fallen to 20 percent, while skilled jobs now account for at least 60 percent of the workforce. Even more important, almost every job today increasingly requires a combination of academic knowledge and practical skills that require learning throughout a lifetime.

President Clinton has worked to help ensure that this new Information Age will also be an “Education Age,” an age of increased educational opportunity for all Americans. He and I share the belief that education is “the way up,” that a better standard of living depends upon an educated, skilled and competent citizenry. The President has challenged Americans to help ensure that once children go to school, they are part of an exciting and challenging environment of teaching and learning that will ensure that every 8-year-old can read, every 12-year-old can log on to the Internet, every 18-year-old can go on to college, and every adult can continue to learn for a lifetime.

We know that children who are challenged to learn enjoy learning — and generally learn more. And we know that a rigorous learning environment, in which every child masters the basics like reading and mathematics, and where parents, teachers and
students know how to measure what level of achievement students are reaching, creates opportunities for future success.

In contrast, children whose minds are not stretched are likely to be bored with what goes on in their classrooms and will have generally fewer opportunities available to them for future success. For instance, a child who doesn't know how to read independently by the fourth grade and to do math, including challenging concepts like algebra and geometry by the eighth grade, will likely have fewer options for the future. These are fundamental skills that provide important gateways in secondary school for students to take a full range of core courses to prepare for college.

We are asking all students and teachers to meet high standards. We are working to ensure access to the newest learning technologies for all students. We also are working to make sure that every classroom has a quality teacher, schools are safe and drug free, and the doors of college are open to everyone who works hard and can make the grade. Finally, we are working to encourage parents, families and communities to get involved in schools to make them better.

At the heart of these efforts must be a focus on the essential building blocks like reading, math, and science. Reading, in particular, is the most basic of basics, on which so much of future opportunity depends. It is no surprise that throughout history, denying people the opportunity to read has been a goal of individuals and governments who seek to suppress a population and inhibit the intellectual growth of their citizens. The most repressive regimes have been those that have taken over the newspapers, television, and radio, closed libraries, and burned books. In contrast, a hallmark of democracy has been respect for the written word and encouragement of intellectual freedoms like reading and writing.

One way to strengthen reading skills is through our “America Reads Challenge,” which seeks to mobilize all Americans to create long-term partnerships of committed educators and citizens built around every school, library and community to help strengthen schools and make sure the young people of those communities learn to read independently by the end of third grade. Among the many features of “America Reads” is the effort to encourage trained tutors to work with students and teachers to give students the extra attention and practice in the basics they need and deserve.

Although Americans today are reading as well as they ever have, it still isn’t good enough. Forty percent of America’s fourth graders currently don’t read at the basic level as measured by the National Assessment of Education Progress [Editor’s note: The NAEP test is administered to small samples of students in 43 U.S. states. Thus, it is an overall indicator, but does not provide specific information on the performance of every student. Without specific performance information, parents and educators cannot take actions to correct individual as well as group needs]. That is why President Clinton has proposed voluntary national tests in 4th-grade reading. These tests would give participating schools a powerful new tool for raising reading achievement and would help parents, teachers, and principals know at what level their kids are learning and allow challenging and appropriate standards for what is being taught.

Our focus also includes a renewed emphasis on the “other” basics — math and science. The importance of these subjects could not be clearer. The U.S. Department of Education recently released a report demonstrating the link between students who take challenging math courses and their success in attending and succeeding in college.

At the same time that our emphasis on these basics needs to become standard fare, we also must work to make sure that our schools teach, use, and apply the newest technologies for learning to supplement the traditional basics. Computers and other forms of telecommunications technology are a vital part of a sound education future and offer tremendous potential to help students learn basic and advanced skills and even complete academic programs and graduate degrees. The education
budget President Clinton recently signed into law includes dramatic new investments in educational technology that will help increase the power of students to learn and teachers to teach with computers and other learning technologies.

With the touch of a keyboard or a trip on the Internet, students and teachers have access to an immense assortment of learning resources, admission to world-class libraries and museums, exposure to new and engaging methods of teaching, and specific information and answers about almost any subject. Most important is that we ensure that these technologies are available to all, and that they work to eliminate, rather than accentuate the learning divide between rich and poor. That is why I am so pleased that this Administration was able to help develop the so-called E-rate (for Education), which will soon begin to provide deeply discounted rates for telecommunications services like the Internet in libraries and schools.

This Administration has worked diligently to strengthen and support quality teaching in our nation’s classrooms, especially in light of the ongoing record influx of students into our schools and the need for teachers in the most vulnerable communities. No profession is more vital to securing a strong and successful future for our nation than teaching.

The President recently pledged to provide funds to help 100,000 teachers become certified “master teachers” — one in every school in America — to serve as an inspiration and a model for others in the profession. But in addition to encouraging the best minds to come into teaching, we need to make sure that those who are already here want to be in the profession. In this regard, we need to counsel those teachers who are burned out to leave the profession through a speedy and fair process. Similarly, we must work to make sure that every school is up to the challenge of educating at these high-quality levels. If a school is failing, we should be willing to close it down or reconstitute it. If a principal is slow to get the message, superintendents and school boards should be willing to replace him or her. We know what works — we’ve seen proven reform like the New American Schools Corporation, which seeks to provide proven designs of successful schools to communities in order to revitalize their own local schools.

Even as we work to try and increase our national investment in education, it is not, and should not be, enough to focus on the financial side of the equation. The most important ingredient for building strong schools requires an investment of people. That is why this Administration has worked to make sure that parents, families, businesses, and communities are an essential part of education. We’ve worked hard to encourage private businesses to become family friendly — to invest in schools in their communities so they can become stronger places for learning, and help their employees become more involved in their children’s education. And we have tried, through voluntary efforts like our Partnership for Family Involvement in Education, to bring together families, teachers, businesses, religious and community based groups for better education.

This kind of involvement can include everything from entire businesses helping schools and communities physically wire classrooms to the Internet to older citizens volunteering their time to read with a student or to tutor. I’ve seen businesses adopt classes and get paired up with students to mentor them and show them the opportunities that come with a good education. Quite simply, when students and families and schools come together, they open doors and create new challenges and learning opportunities.

There are real signs of progress and achievement in education today. In math and science, for instance, two areas where we have focused our attention over the past decade, student achievement is up significantly. Another sign of progress is the great increase in the number of secondary school students who are taking the core academic courses.
This shows that we are finally getting serious about education in this country.

And perhaps most importantly, public education is beginning to turn the corner. We are not where we want to be, but we are headed in the right direction. Communities and families and businesses are getting involved with their schools and working to strengthen them. We must make sure, however, that we are not sidetracked by “magic-bullet” solutions that aren’t really solutions at all, but political gimmicks that work only to divide us.

Recently, the National Commission on Teaching and America’s Future released a report entitled “What Matters Most.” It noted that “there has been no previous time in history when the success, indeed the survival, of nations and people has been tied so tightly to their ability to learn. Today’s society has little room for those who cannot read, write, and compute proficiently, find and use resources, frame and solve problems, and continually learn new technologies, skills, and occupations.”

As much as any president before him, President Clinton understands the critical role that education will play in our nation’s continuing success and the achievements of every citizen in this great nation. By working to ensure that our nation’s historic emphasis on education not only continues, but also is enhanced, we can help to ensure that our nation and every person in it has a brighter future.

Richard W. Riley is a life-long resident of South Carolina and served as an elected official and governor of that state before being selected by President Clinton as Secretary of Education in 1992. As South Carolina Governor, Riley worked actively with Arkansas Governor Bill Clinton to make important strides in education in their states; these programs helped shape the current national education agenda.
**Educational level of American Populace**

- Secondary School Diploma or less..............54%
- Some college or Univ. study, no degree........25%
- Undergraduate degree (BA or BS)..............13.1%
- Graduate or Professional degree.............7.2%

**Primary and Secondary Education**
(Grades 1 - 12, based on 1992-93 figures)

- Total U.S. Population..........................255,078,000
- U.S. Population in grades 1-12..............42,816,000
- Total instructional staff......................3,140,000
- Total expenditures..........................$253,859,000,000
- Students in public Schools*..................89%
- Students in “low-tuition private schools”......9.5%
- Students in “elite” private schools...........1.5%

**U.S. Public Schools are governed by some 15,000 local school boards.**

*Public Schools or institutions in the U.S. are those supported by Public, or taxpayer, funds. Private schools use “private” resources, but are largely open to anyone able to meet entrance requirements and pay the fees.*

**Higher Education in the U.S.** (includes community or junior colleges—which offer Associate Degrees after two years, regular colleges which are largely four-year institutions leading to a B.A. or B.S, and universities, comprehensive institutions which offer both undergraduate and substantial graduate education (masters degrees — M.A. or M.S.; Doctorate — Ph.D.) **(1996 figures)**

- Total undergraduate students..............12,262,000
- Graduate students.............................1,721,000
- Professional degree students..............295,000
- Foreign students..............................455,000
- Students in Public institutions..............80%
- Students in Private institutions..........20%
- Avg. annual tuition & fees, pub. inst......$2689
- Avg. annual tuition & fees, pub 2 yrs......$1194
- Avg. annual tuition & fees, private inst...$11,522
- U.S. public colleges & universities........605
- U.S. private colleges & universities.......1610
- U.S. public 2 year colleges...............1036
- U.S. private 2 year colleges..............437
- Annual expenditures, public.............$109,309,541,000
- Annual expenditures, private............$64,041,076,000

**Education in the U.S. after the secondary level also includes a range of “Vocational Institutions,” schools providing direct work-related programs in skills such as secretarial training, auto mechanics, etc.**
Social mobility — the intrinsic opportunity Americans possess to advance in their lives — is an underlying value in United States society. Nowhere, perhaps, is this more evident than in terms of the acquisition of knowledge. This snapshot, by a veteran observer, of post-secondary education in the second half of the 20th century, clearly reflects its evolution and expansion, as well as the manner in which institutions like colleges and universities swiftly respond and adapt to changing social and economic needs.

Roughly a half-century ago, at the beginning of the post-World War II era, the United States already claimed a well-developed system of higher education, with 1.5 million students enrolled on some 1,700 campuses across the country. It was a system with its own history. It encompassed universities that combined, under one roof, English-style undergraduate colleges with German-style graduate and research faculties. It had ended the hegemony of the classics by admitting practical studies such as agriculture and engineering to the curriculum in the 1860s, and coursework in business, health and numerous other fields during the first four decades of this century. It had invented the course and credit-hour system in the 1890s as a means of encouraging transfer between institutions, and accrediting associations — run by the colleges themselves — to assure quality. And by the early decades of this century, the system had developed faculties to rival in intellect the best in the older European universities.

It should be noted that like their older counterparts, the newer American universities, even in 1945, were elitist, male, white and relatively aloof from society. Yet however uneven or parochial they were, these were the institutions that had educated for the nation the likes of Presidents Thomas Jefferson, John and John Quincy Adams, Theodore and Franklin D. Roosevelt; poet Walt Whitman and novelist Henry James; pioneer education theoretician John Dewey and social activist Jane Addams; and the Rev. Martin Luther King, Jr., leader of the African-American civil rights movement.

In the five decades since World War II, America rebuilt and greatly expanded participation in its system of higher education by a stunning factor of 10, in an effort to make educational opportunity more open and accessible, fairer and more relevant. Government and industry came to see higher education as an investment in an educated workforce that would propel the nation to new levels of economic well-being and national security. Individuals came to see higher education as an indispensable investment in their own futures, as a route to social mobility and personal fulfillment. The combined result was a system that in 50 years...
ballooned from 1.5 to 15 million students, resulting in the world’s first example of “mass” higher education. In the process, to accommodate this great change in scale, entirely new ways had to be found to govern colleges, finance campuses and students, and assure quality and accountability.

Postwar Foundations

Three events around the end of World War II set the stage for this growth.

In 1944, the U.S. (federal) Government enacted the G.I. Bill, which promised the nation’s military men and women that at war’s end, Washington would pay for them to attend college or a trade school. Millions of returning veterans, few of whom would have otherwise so aspired, chose to pursue higher education, flooding enrollments well into the 1950s. These mature, motivated young adults did well on campus, graduated into a host of occupations and professions, and became such a model of success that the very idea of college attendance, and its benefits, took on new salience for Americans.

The second milestone development came in 1947. Noting the impressive academic achievements of the veterans already enrolled, a presidentially appointed commission proposed to President Harry S Truman the startling recommendation that not one-tenth but fully one-third of all youth should attend college — and that it would be in the nation’s best economic and social interests to provide the necessary opportunities. In the years just after the war, therefore, the experiential and conceptual underpinnings for expansion were set firmly in place.

The third significant item was a widely-read report issued in 1945 by Vannevar Bush, head of the respected U.S. Office of Scientific Research and Development. Bush, a physicist and dean at the Massachusetts Institute of Technology, had mobilized wartime efforts to bring to battle radar, penicillin and a host of new weapons systems — most notably the atomic bomb. Acknowledging that so many of these successes derived from a foundation of basic research, Bush created the vision of science, in his words, as an “endless frontier” for the nation, investment in which would bring untold dividends in national security and social advancement.

Out of the war effort came a whole generation of top scientists committed to national security work, men (and some women) who moved back and forth between government service, national laboratories and the campus. In 1950, the U.S. Congress chartered the National Science Foundation and charged it with promoting research and development and the education of scientists. Fed by Cold War fears, U.S. Government-sponsored university research soon became quite a significant venture, with federal expenditures exceeding $1 billion by 1950. In subsequent years, public and private expenditures for university-based contract research — peer reviewed and competitively awarded, as Vannevar Bush had urged — rose to $21 billion by 1996, doubtless with many benefits to the United States, but also to the great advancement of science itself within the university, and to the roughly 100 institutions of higher learning that garnered 95 percent of these federal funds.

The Booming Sixties

In the 1960s, the higher education system underwent intense expansion and development. The immediate cause was the arrival at college doors of the “baby boom” generation — the heightened numbers of 18- to 22-year-olds born in the aftermath of World War II. These young men and women, often the sons and daughters of G.I. Bill beneficiaries, had lofty educational aspirations. As a result, between 1960 and 1970, college enrollments jumped from 3.6 to 8 million students, with aggregate expenditures rising from $5.8 to $21.5 billion. To accommodate this enrollment rise, existing universities and four-year colleges grew in size, helped by federal construction loans and high capital investment by the sponsoring states.

The most noteworthy development of the decade, however, was the emergence of a distinctive new institutional form, the comprehensive community college. “Junior” colleges, offering the first two years of instruction for students intending to transfer to baccalaureate (four-year) institutions, had been a fixture since the early 1900s. In the early 1960s, a new vision for such an institution — explicit
community-relatedness, open-door admissions and high status for vocational-technical studies — emerged. Soon, every community wanted its own “democracy’s college,” as community colleges came to be known. In the course of the decade, new community colleges opened for business at the rate of one per week — a total of 500 in 10 years. Enrollments soared from 453,000 students to 2.2 million. Equally important was the fact that although two-thirds of the earlier enrollments were in programs designed for transfer to a four-year program, by the 1970s, 80 percent of all community college students were in shorter-term programs — preparing to be engineering technicians, health care workers, law enforcement officers, among dozens of occupations. If a community needed trained workers for a new plant, adult basic education, certificate programs for day-care workers, or English-language training for recent immigrants, its community college was there to respond.

The great expansion of existing institutions, combined with the creation of new ones, raised needs at the state level for new mechanisms of planning, governance and finance. As a result, in the 1960s, many states created high-level boards to govern or coordinate their burgeoning systems, with the role of overseeing a planned growth of public-sector higher education. A notable and influential model was California’s 1960 Master Plan, designed by Clark Kerr [Professor Emeritus, University of California]. It specified that the top 12 percent of all California secondary school graduates would be guaranteed admission to the prestigious University of California — which grew or built nine campuses statewide to accommodate these numbers. The plan also stipulated that the top 30 percent would be guaranteed admission to a campus of the California State University, which eventually grew to 22 campuses; and that every secondary school graduate would be guaranteed enrollment at a local community college (106 of which were eventually developed). To assure access for all students, public-college fees were to be kept as low as possible, with the state funding most of the costs of four-year university attendance. Community colleges, with their more frugal budgets, were financed one-third by the state, one-third by the sponsoring community and one-third from student fees.

Students and Markets

Through the mid-1940s, Washington’s role in higher education was restricted mostly to data gathering. Education at all levels, many believed, was a matter reserved to the states by the Constitution; federal support would bring unwanted “intrusion” if not “control.” But after World War II, with national security interests coming to the foreground, support for university-level research increased. In the late 1950s, after the Soviet Union launched its Sputnik space probe, national defense was invoked as a reason to support the training of engineers, scientists, foreign-language specialists and various building programs.

In the 1960s and 1970s, a consensus emerged that special-purpose federal programs should be curtailed in favor of federal aid to students themselves, in support of the national commitment to equality of access without regard to accidents of birth. The Higher Education Act of 1965 and supplementary Education Amendments of 1972 created today’s system of student financial aid. It combines grants, work opportunities and loans to help full-time students meet the tuition and living costs of college attendance.

Significantly, the amount of aid for which a student qualifies was determined both by family income and the costs of the college of the student’s choice. In other words, a young man or woman from a lower-income household might receive $2,000 to attend a public institution (a state university), and $10,000 to enroll in a private institution. The aim of this provision was to “level the playing field” between public and private higher education and provide every student with access both to the system in general and specifically to the college of one’s choice. Additional broadening enactments in the late 1960s and 1970s forbade any college receiving U.S. Government allocations to discriminate on the basis of race, gender, religion, national origin or handicap.

The 1972 amendments went one step further to place a distinctive mark on American higher education. It awarded financial aid to the student, not the institution. In effect, all colleges, public or
private, would have to compete for their enrollments. The hope was that a new, student-driven “market” for higher education services would compel schools to focus more on student needs. As enrollment growth continued through the 1970s, the effects of this change were initially small. But in the 1980s, as the size of the college-age population began to decline (the beginning of the post-baby-boom era), all types of colleges had to learn how to market themselves, simply to maintain their enrollments. In the years that followed, through today, highly-qualified students might receive literally hundreds of recruitment contacts when enrollment season begins, and even earlier.

Over time, then, the “postsecondary” marketplace was remade. A relative handful of prestigious universities and colleges, many of them private, assumed commanding niches that allowed them to admit just a small fraction (10-20 percent) of the able students applying. In another test of this resulting stratification, the top 30 colleges in the United States today enroll 80 percent of the minority students in the country with standard aptitude test scores of 1,200 or above (out of a possible 1,600). At the opposite end of the market, marked by lower tuitions and near-open-door admission, a score of aggressive, entrepreneurial universities have sprung up. The newest, the University of Phoenix (Arizona), enrolls an astonishing total of 40,000 students at some two dozen sites across the American West.

TAKING STOCK

To foreign visitors, a remarkable feature of American higher education is the degree to which it is market-driven and free of central direction. Indeed, all institutions, large or small, public or private, compete with one another for faculty and administrative talent, research and foundation grants, legislative appropriations and alumni support, and — overall — public approbation and approval. In addition, larger institutions compete with one another through high-visibility athletic programs.

At the same time, U.S. institutions tend to be relatively dynamic and responsive to economic and social changes, at least as reflected by markets. Even without centralized manpower training, the supply and demand for such trained professionals as engineers, physicians and educators has remained roughly in balance. On the disappointing side, most observers sense that an enhanced responsiveness to students hasn’t translated into fundamental improvements in the quality of undergraduate education itself. Nor will markets by themselves always reward a college’s attention to deeper values, such as a broad-based curriculum or foreign language study.

That said, the system’s overall record of accomplishment remains impressive. If an original goal was to provide equal access, it has been substantially achieved. Women, one-fourth of all enrollments in 1950, represent 55 percent of the student population at present. Today’s enrollment of African-Americans (10 percent), Hispanic-Americans (7 percent), Asian-Americans (6 percent), and Native Americans (1 percent) approaches their percentages in the general population. Overall, 77 percent of all 18-year-olds finish high school, and two-thirds of this group proceed to college.

Additionally, among two- and four-year public campuses, adult, part-time enrollments are now in the millions and account for over 40 percent of total enrollments. On many campuses, the median age is 25 to 30. Today, thanks in part to degree-completion programs for people in their 30s and 40s, fully a fourth of the U.S. adult population holds a college degree.

PERSPECTIVES

Visitors to these shores notice several other distinctive aspects of U.S. higher education. One is its sheer scale and cost. Fifteen million students attend some 3,700 postsecondary institutions, ranging from a few hundred students to the 50,000 at state universities in Ohio and Minnesota. Aggregate expenditures for higher education now exceed $200 billion a year — a mind-boggling 2.4 percent of the gross domestic product (GDP), compared, for example, with the 0.9 percent of GDP expended in the United Kingdom. Of the $200 billion, about half represents the allocation of
public money, the other half income from tuition and fees, sale of services, endowments, and voluntary giving (this last category alone totaled $14 billion in 1995-96). A typical large research university (with a teaching hospital attached) has an annual operating budget of $2.5 billion, enrolls 35,000 students, employs 4,000 faculty members and 10,000 support staff, raises $150 million a year from private donors and boasts an endowment of over $1 billion. The average public four-year campus charges $3,000 a year in tuition and the average private college charges $13,000 a year — with roughly half the students at each type of institution receiving financial aid.

The huge tuition differential between public and independent higher education particularly puzzles foreign visitors. How can the more expensive private sector institution survive? The tuition difference arises, of course, because the private college does not enjoy direct public support. In fact, however, to the student from a middle- or low-income family, the tuition differential may all but disappear through financial aid (with perhaps a larger loan to repay upon graduation). Still, the bargain of public higher education, and its availability in virtually every community, has brought to it most of the enrollment gains of the past decades: Public colleges enrolled half of all students in 1945, and 78 percent today.

Is the private sector doomed? Not at all. Private colleges prosper by offering distinctive curricula, more inviting campus environments, and (often) the prestige of their degrees. Many continue their appeal to founding constituencies, religious or ethnic. Private higher education tends to be more innovative, entrepreneurial and values-driven, and serves as a creative balance to state-controlled higher education.

Another uncommon feature of the American college, both private and public, is the character of undergraduate studies. In the course of four years of study, the average student will devote about a third of the time to studies in a “major” (economics, physics, business and so on); one-third to elective and supporting courses; and — mostly in the first two years — one-third to general education. The last of these represents the university’s historic commitment to produce graduates who will study broadly; appreciate science, philosophy and the arts; learn the habits of democracy; and develop higher abilities to write, find and use information, think critically and work with others.

Since much of a college’s general education program is prescribed for the student, it inevitably raises questions of values. Faculties engage in endless debate as to what should be taught and learned. Some hold out for a canon of Western classics; others argue for the inclusion of multicultural topics and voices. All the while, with the flood of new, often less-well-prepared entrants into college and increased student job-mindedness, it becomes more of a challenge for schools to maintain student (and sometimes faculty) enthusiasm for a broad base of electives. And so various innovations have been employed in teaching, curricula and technology to engage students and help them succeed.

Statistically, as the century winds down, U.S. institutions of higher learning annually award about 540,000 associate (two-year) degrees, 1.1 million bachelor’s (four-year) degrees, 400,000 master’s degrees, 76,000 professional degrees (in law, medicine, and other fields) and 45,000 doctorates. Among Ph.D.s, the biological and physical sciences, mathematics and engineering predominate; at leading universities, as many as 50 percent of candidates for those degrees are from outside the United States. Within graduate schools overall, the growth area is at the master’s level. A constant heightening of labor-market and student expectations has led to significant increases in master’s-level studies in business, education and the health professions.

Across all levels of American higher education, the 1990s have witnessed an explosion in deployment of information technologies. Most campuses, and indeed several entire state systems, are “wired up.” Entire libraries are on-line; technology expenditures totaled $16 billion in the 1980s, and the figure is expected to have doubled in this decade. On dozens of campuses, every student and faculty member now has his or her own computer (and often a web page); in 35 percent of all classes, professors and students
communicate by electronic mail (via computer). The effects of all this on modes of instruction and on the character of student and faculty work are being intensely scrutinized.

One final development is a consequence of this technological revolution: a huge increase in distance education. Ninety percent of all U.S. institutions with enrollments of 10,000 or more now offer courses on-line. Coming on-line, too, are a number of brand new “virtual” universities, the best-known of which, the Western Governors University, begins operations across 11 states in January 1998. Technology, even as it remakes the classroom, seems poised to remake the postsecondary marketplace, too.

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and I don’t see it becoming any less relevant as our society becomes more specialized and hi-tech. Anyone can punch numbers into a computer. But to run any kind of large organization, you need a much broader perspective. So when we speak about the training of an elite, and what employers are looking for in candidates for positions of responsibility, the tradition of the educated person is as essential as it ever was.

They can’t always define it. We’re talking about judgment, character, sensibility — notions that by their very nature are hard to quantify. Ultimately, it simply comes down to someone steeped in the tradition of the educated person.

David Denby is film critic of New York magazine. He is the author of Great Books: My Adventures with Homer, Rousseau, Woolf, and Other Indestructible Writers of the Western World (Simon and Schuster, 1996), an account of a year spent recently immersed in the Western canon at Columbia University, a course of study he first took three decades earlier as an undergraduate at the college.

Accreditation is the granting of public recognition to a school, university or course of study which meets certain established standards and qualifications. It provides a professional judgment regarding the quality of the schools or programs, while also encouraging continual improvement.

The state governments usually assume major responsibility for educational issues at the primary and secondary levels. Each state defines its expectations and basis for accreditation. However, for post-secondary education, standards are usually monitored and evaluated by non-governmental accrediting bodies whose regulations and authority derive from their membership. The current edition of Accredited Institutions of Postsecondary Education; (Programs and Candidates) lists all accrediting agencies recognized by the American Council on Education (ACE). It is available from ACE at One Dupont Circle, Washington, D.C. 20036. Netsite: http://www.acenet.edu/home.html

Accreditation usually consists of the following steps:

- The establishment of standards.
- An institutional self-study, in which performance is measured against established standards.
- On-site evaluation by a team of outside educators selected by the accrediting agency.
- Publication of the fact that the institution met the standards.
- Periodic re-evaluation of the institution’s programs.

A significant purpose of accreditation is to enable students to transfer from one accredited institution to another. Financial aid, from government and private sources, is usually awarded only to students who attend recognized or accredited institutions.

The American Association of Collegiate Registrars and Admissions Officers publishes Transfer Credit Practices of Designated Educational Institutions — An Informational Exchange. It gives a state-by-state outline of policies for awarding coursework credits for students who transfer within the state.

In 1984, the Council on Postsecondary Accreditation (now the Council for Higher Education Accreditation, or CHEA) recognized 11 accrediting bodies that include most traditional colleges and universities. These are the Middle States Association of Colleges and Schools, New England Association of Schools and Colleges, North Central Association of Colleges and Schools, Northwest Association of Schools and Colleges, Southern Association of Colleges and Schools, the Western Association of Schools and Colleges, American Association of Bible Colleges, Association of Independent Colleges and Schools, Association of Theological Schools, National Association of Trade and Technical Schools, and the National Home Study Council.
The president of the Institute for Educational Leadership discusses issues and trends in primary and secondary education in the United States. Is our nation’s historic commitment to mass public education appropriate in its current form? What are the prospects of experiments to improve public schooling? Following the interview, Journal editors review some of the concerns about educational quality in Grading U.S. Education Today.

**QUESTION**: In your view, what are the principal issues affecting U.S. primary and secondary education as we enter the next century?

**DR. USDAN**: The primary issue is to increase the quality of public education in the United States. The whole movement to institute and enhance standards at the state, local, and national levels is a reflection of this... and the interrelated concerns about having an economically competitive work force that will be able to compete in the global economy. The improvement of student achievement is the primary issue as we head towards the millennium.

**Q**: What are the components of quality public education? You mentioned standards, for example. That might be construed as one element that is going to contribute to this. What are a couple of other elements that you see?

**DR. USDAN**: This issue is highly politicized because we have a very strong tradition in this country of local control of education, a highly unique, decentralized, educational system. In most parts of the world education is much more centralized, run by a central agency, a bureaucracy located in a national capital with a single curriculum. We have developed this highly decentralized system in which education legally is a state responsibility, and historically until relatively recently there has been a widespread consensus that most operational responsibility for schools should be delegated to these 15,000 local school systems. These systems can range in size from a one-room schoolhouse in a rural area in Nebraska or Kansas to a school system like New York City, which educates a million-plus kids. We have these and everything in-between.

**Q**: These school systems are actually creatures of the state structure?

**DR. USDAN**: Exactly, and legally states can create and dissolve school districts at will. But, again, there is a unique tradition of localism that is extraordinarily strong in American public education. What has been so interesting about the evolution of the current standards movement [calling for implementation of national, challenging, curriculum benchmarks to measure the academic achievement of all U.S. students] is that it has been pushed in
many ways by corporations and the private sector, which for most of our history were repelled by the notion that the national or federal government should be involved in any way with standards. These groups were worried about national government control. They were worried about what national control would mean to local control and property taxes, to business taxes, and so forth. It’s only within the last decade or two, with the transcendent concern about economic competitiveness in the global economy, that corporate leaders have been as involved as they have been in pushing for national standards. And it is a profound switch, the antithesis of where most private sector leaders have stood for most of our educational history.

Getting back to your original question, if you look at the development of standards, the issue of what kids should know, that is a question which is being pursued in states and localities. The debate about national testing that we had recently in Congress is a reflection of the interest in this issue.

So you have to set the standards. Then you have to decide how you create an assessment system that will basically evaluate whether kids are meeting standards.

Then, you have to develop an accountability system that will establish consequences for those who do not meet the standards.

Q: Is that accountability system a special bugaboo [a steady source of concern]?

DR. USBAN: The accountability issue is a bugaboo because despite the fact that it has built up remarkable momentum, it still runs counter in many ways to the whole tradition, history and culture of American education, in which the theology of localism still runs strong. The standards movement has picked up tremendous momentum in the face of this tradition of localism because economic concerns about competitiveness transcend some of the old bugaboos about local control and the theology of localism.

Q: Let’s look at local control, which is so central to the American educational ethos. Where does it come from?

DR. USBAN: Well, it dates back more than 200 years, to when we were largely a country of immigrants, mainly from Europe, people fleeing from religious and political oppression, and establishing local communities [editor’s note: Local control of education is one of the powers reserved to the local and state governments under the U.S. Constitution - see The Community And The Classroom by Denis Doyle in this volume]. As the nation moved westward, there were emerging concerns about big government and central government and the theocratic focus of state-imposed religious requirements or political requirements which would be reflected in schools. In response to these concerns, local school committees began to develop, originally in New England. These have evolved into local school boards in most parts of the country.

I think that the power of localism in education was based on strong, pioneer and individualistic mentalities as well as on the fear of an all-too-powerful central state imposing its will among people who were trying to escape from religious and political persecution.

Q: You’re talking about, in essence, concerns about content driving this local focus, but didn’t local control have a great deal to do with funding? There was this sense that the community was responsible for arranging for education, however they chose to do that.

DR. USBAN: Absolutely. That’s a very central point, because it really wasn’t until the early 1980s that more than 50 percent of the support for public education was provided by non-local sources. So part of the ethos for local control is the fact that local property taxes provided 80 to 90 percent of the finances for public education through much of our history.

Local control has had wonderful advantages in many ways, in terms of providing schools close to the people, but it also has generated profound inequities as our society has become more diverse in terms of its population and more stratified in its socioeconomic composition. And in many ways we have a school-finance system that perpetuates the rich getting richer and the poor poorer, in which
people fight to maintain in local communities the advantages that their kids have. The National government has instituted some targeted programs to try and ameliorate this somewhat, but the problems still persist.

The selection of a school system, for any of us who have had children, is the primary reason why we move to communities. It’s the major consideration. You don’t move to a community because it has a world-class fire department or an internationally prestigious mosquito-abatement district; you move to a community because of the reputation of its schools. And people make all kinds of economic sacrifices. They make sacrifices in terms of long, tedious commutes to enhance the educational opportunities provided to their own children. It’s the most natural and human response of parents. In many cases, this is what makes the problems of equity in school finance and possible redistribution of resources so singularly complex and difficult.

Q: You point out that there is this inequity, derived largely from dependence on the property tax — taxing of local homes or businesses or whatever at a certain rate. That rate varies, and the value of homes in different places in a state or in a region varies. Is that correct?

DR. USDAN: Exactly. And the wealthier people can afford the more expensive homes. They also can generate more property tax revenue, and ipso facto they can invest more in computers and teachers’ salaries and science labs.

Q: How has the U.S. attempted to counter this problem? You mentioned that is was only in the 1980s when the property tax ceased to be the primary basis on which we fund schools. What other resources are we talking about?

DR. USDAN: Well, more broadly-based state taxation, either sales taxes or state income taxes. But in most states, the local resources have remained quite important, although enormous variations still remain from state to state. In New Hampshire, for example, 85 to 90 percent of the school bill is still paid from local sources. Nationally, on average, 40 to 45 percent of the school budget would be from local resources, 50 to 55 percent from the state, and the national government, which has always been the very junior partner, financially, provides about 5 percent now.

Q: That's very much a contrast between the U.S. system and those of other countries.

DR. USDAN: Certainly, I am pleased you raised the finance issue because that is definitely central in driving so much of the politics. And that makes our system extraordinarily unique, and foreign visitors who come over here have a hard time understanding our practices, from both an organizational point of view and an equity point of view. In many ways, if you look at the particular problems faced by the cities and the inner-ring suburbs, you have more fiscal inequities because you have something called the “municipal overburden” factor. In other words, the local property tax not only supports schools, but it must support other local functions: police, fire, recreation and so forth.

Q: Also transportation in some ways.

DR. USDAN: Yes, and obviously in an urban community, police, fire, welfare, etc. are going to be more costly, which compounds the problem because you have fewer and fewer dollars available for schools.

In suburban communities, particularly homogeneous suburban communities — even those close to our urban centers — three-quarters of the property-tax will go to schools because the other municipal functions are less costly.

Q: So what we’ve been saying is that funding and the resolution of funding is very much an issue, and one of the important trends will be the search for alternatives.

DR. USDAN: We have been fighting over this issue for years. The political power in our system is now in the suburban communities. When those interests are in play, the concepts of equity or “redistribution” kind of disappear from our current collective vocabularies.

We have had, since the early 1970s, a whole series of court cases, indeed ongoing court cases in most states of the country, questioning and litigating the inequities of the current school-finance system and the reform-movement in terms of equity and adequate resources. And state legislatures have
made adjustments, but by the time the adjustments are made, it's time to litigate again. So in many states around the country, you have had litigation that has been going on for decades.

Q: Speaking of litigation, probably the best-known for many people is the issue of busing, in which the courts defined a public good, the greater integration of the schools, and then came up with solutions which they imposed on the system. Do you think that is going to continue?

DR. USDAN: What is beginning to happen now, because the demographics of our population have moved a lot faster than the court cases, is that we now have even deeper racial segregation. The issues of diversity are much more complicated in many ways than they were in the 1960s and early 1970s, when the issue of integration was literally a black-and-white issue.

Now you have the dramatic growth in the Latino population, the Asian-American population, so the issues of race and ethnicity have become infinitely more complicated. For example, half the recent population growth in this country has been in just three states — Florida, Texas and California. The majority of the growth in those areas, and in school enrollments particularly, is Latino. So the whole ball game has kind of shifted and become more complicated.

But let's get back to our discussion about the courts. We have already said that the national government has had relatively little influence over American education financially but people often ignore the profound impact of the federal [national level] courts on educational policy. The decision of the Supreme Court in 1954 [Brown v. Board of Education — the landmark decision by the Supreme Court that separate, but equal, educational facilities did not meet the constitutional guarantee of equal opportunity for all students] affecting school segregation is a very good example.

Q: Another area where the Court's decisions on national laws has had substantial impact is the area of disabled or handicapped students, and students with learning disabilities. A very substantial portion of the increase in school spending over the last 15 or 20 years has gone to support provision of educational opportunity for these disadvantaged students.

DR. USDAN: Yes. I think this is another excellent example of the national government's influence, particularly on equity issues. We had the Title I federal programs which helped disadvantaged kids. But the education-of-the-handicapped legislation, which I think was enacted in 1975, compelled school systems throughout the country to provide for the needs of kids who were physically handicapped and handicapped in other ways — students in too many cases whose need had not been met before.

At the same time, these national requirements created a backlash because they required extensive plans and expenditures but never provided the resources to implement the legislation. Originally the goal, I believe, was that the national government would provide 40 percent of the special-education costs, but I think the percentage that [it] actually provided has never gone much above 8 or 9 percent. So these requirements, although wonderfully intended for the noble cause of handicapped kids, helped to generate a backlash against national government intervention, bureaucracy, regulations, and so forth. This demonstrates how complicated our federal intergovernmental system can be.

Q: How does this complex structure shape our educational governance?

DR. USDAN: Let's talk about that in terms of centralization or decentralization. In our federal governmental system you have national, state, and local governments, each of which has certain responsibilities. Under our constitutional and statutory framework in this country there is, of course, a federal constitution and each of the states have their own constitutions. In terms of educational policy, the federal government has had influence, the states have had the legal responsibility, and the locals basically historically have had the operational responsibility.

So when you are talking about educational policy in this country, you are talking about many different, diverse actors, ranging from teachers, to principals, to school superintendents, to parents, to school board members at the local level. You have in many
states intermediate districts which provide some special services between local school districts and states. You have education departments. You have state legislatures. You have governors. You have education aides to governors, who are increasingly influential in the policy-making process. And then you have the influence of the federal establishment we have been talking about.

Q: The charter-school movement [movement to promote public schools whose governance is outside the traditional public school structure, but which receive public funding] is gaining a certain amount of interest regarding its possible impact on our educational structure.

DR. USDAN: I think that the charter-school movement has emerged from several different historical strands. One is a growing distaste for the increasing numbers of bureaucratic and regulatory requirements on schools, the sense that teachers and principals who are at the building level where kids are, where the teaching/learning process takes place, are constrained by an array of bureaucratic requirements that have no relevance to the actual education process. So that is one attraction of the charter-school movement.

There is also the attraction of choice. Wealthy people can select where to send their kids to school, whether they are living in an expensive, suburban community or sending their kids to private or independent schools. The charter-school movement has gained support in areas where the schools have very badly served kids, particularly in the inner cities, where there is growing sentiment that parents and teachers and people at the building level ought to be given more prerogatives and authority.

So greater local responsiveness is one argument for decentralization. An argument for centralization is that what is important about schools is not who governs at the local, state, or national levels, but whether kids are learning, and whether or not kids are coming out trained and are literate and understand science, computers, English, math, etc. What you have in posh suburban communities are schools tailored for people who primarily want their kids to be able to do well on [standardized college admission tests], and to get into Ivy League colleges or prestigious, flagship public institutions.

And so the governance issue in such communities is less relevant. Forty, 50, or 60 years ago, places like New York City; Chicago; Philadelphia; Detroit; Washington, D.C., had very bureaucratized large school systems, but kids were achieving despite the size of the districts or their centralized governance structures.

Q: Very often when we look at per-capita expenditures for education in the United States and we compare them with per-capita expenditures for students overseas, one of the disparities in those simple comparisons is that a lot of the education money in some districts in the United States goes for some of what are, in fact, social programs, for instance, for school-lunch programs, for remediation kinds of programs, for after-school-care programs, and this isn’t the case in a lot of other countries.

DR. USDAN: I’m sure that’s so. One of the real dilemmas that the schools have is with changes in the family structure in all kinds of communities, not just poor cities or rural areas. We have had profound changes in family structure. Increasingly, both parents are working. There are growing numbers of single-parent households in all kinds of communities. The case can be made that nobody is looking out for kids, and the schools have the dilemma that they are virtually the only institution left in the lives of many kids.

So what does a school do if a kid comes in hungry in the morning, hasn’t had breakfast, or if a kid has a toothache and hasn’t been to a dentist? That kid isn’t going to learn to capacity until such basic needs are met.

And so what is really called for is a reassessment of our existing local school governance system. We have developed in this country, as part of the municipal reform movement at the turn of the century, a separation between schools and general purpose government; we thought the schools were too important to be politicized, so we created totally separate governance systems.

So you have some schools sitting in splendid isolation from the mainstream of society with separate funding streams and so forth. Social services, health services, the employment and training system and so forth are under the aegis of
general-purpose government, at a time when more kids are growing up in poverty or in economically marginal circumstances.

So kids are entering the schools with all kinds of social and health problems which confound their ability to learn but the school is divorced from the resources and systems needed to fight such problems.

How do you create new kinds of social service delivery systems that involve and use the school? Education’s primary mission should be academic; I wouldn’t dispute that, but since the schools are the place where the kids are, we have to find new creative ways of establishing community schools that focus upon this primary academic mission, but also have their facilities used for parent education, remedial work, and social services. And we must create a rational funding system to do this so that the schools don’t have the whole burden.

You are beginning to see this happen. In the big cities first, in places like Boston, Chicago and Cleveland, you have mayors becoming increasingly interested in schools because they recognize that however much they rebuild their downtowns and erect beautiful buildings and museums, they are never going to attract the middle class back into the cities unless they do something about the schools.

So the mayors are getting more and more involved, and I think that changes in local governance are going to be some of the major issues in the new millennium.

Q: Multiculturalism or multilingualism are issues which have attracted wide popular attention in education, both in terms of how they function in the classroom and in the curriculum. Multicultural sensitivity has been a concern in education in the United States. Is this going to continue?

DR. USDAN: Sure. I think as the population increasingly becomes more diverse; we are going to have to think about what is majority and what is minority in this country in terms of our demographics. This growing diversity is perhaps one of the primary challenges facing the entire society. It is hitting the schools first because of the fact that the new immigrants are basically a very young population.

So these kids are rolling up through the schools. More than 30 percent of the school enrollment is already minority. By the middle of the next century, our current minorities will constitute 50 percent of the overall population. Spanish is the most common spoken language in the Western Hemisphere. Our curriculums, our capabilities for dealing with languages other than English; our cultural sensitivity must meet this challenge.

Q: We talk about the impact of immigrants on the school system, but another issue in terms of the American education system goes in the other direction: the impact of the schools on the immigrant, the socialization, the creation of a citizen of the United States. Can you talk about that for just a little bit and maybe speculate on whether or not that’s still relevant?

DR. USDAN: It is very relevant. I think we have all lost sight of that fact. My father, for example, was an immigrant and was very poor. He grew up on the lower East Side of New York City, and went to Stuyvesant High School [a city-wide, selective institution], and became a dentist. He provided his family with a very comfortable, middle-class background. That’s just one generation ago. I was able to go to an Ivy League college and have a good professional career, etc. If my father had not received a high-quality public education, my chances for success would have been diminished.

Public education historically and traditionally has been the engine of our democracy and social mobility. I think that we have lost sight of this vital contribution of public education.

With all of the problems of our school systems and all the inequities, the American public education system is still the world’s grandest mass-education experiment. It has provided a pathway for social and economic mobility for millions of Americans. Most of that history took place in what was a different kind of economic and psychological environment in which our country and its economy were constantly growing. We were always expanding in pursuit of our “manifest destiny.” There was a profound belief that if you got a good education, there was growth and opportunity. I think that what has begun to
happen in the last couple of decades, as we worry about our own kids, is that we are not as sure as we once were of achieving the classic American Dream in which you could reasonably aspire to do better than your parents.

Some of us were the beneficiaries of the post-World War II period, when much of the rest of the world was shattered, and the United States was an economic colossus. We were 6 percent of the population, generating about 40 percent of the world’s GNP. That couldn’t go on forever. Europe, and ultimately Asia, rebuilt, and the resulting economic competition and what happened to our manufacturing industry created considerable self-doubt in our culture about economic mobility.

I think in many ways that these economic doubts also curbed the possible renaissance of “liberalism” and any movement towards redistribution of resources. It is a lot easier being a liberal in an expanding economy than in a contracting economy. I think people are increasingly concerned about the futures of their own kids... and don’t want their own school systems to have to pay the price for redistributive policies.

The charter-school movement, I think, can be an important movement because it creates alternatives, competition, and perhaps most importantly, it can trigger some changes in some of our more ossified public-school systems. Charter schools service only two-tenths of one percent of the kids. So the challenge is to strengthen the traditional public schools. That is where almost all of the kids are.

Q: What about vouchers [a system under which public funds are used by parents to pay for their choice of public or private, possibly religious, school]?

DR. USDAN: One of the purported reasons the public schools are so unresponsive is that they have a monopoly. But most people, even within public-school systems, now support choice, and the charter-school movement is growing. The major teachers’ unions have their own recently launched charter-school operations. I think there is a growing, albeit grudging acceptance of choice even within the public school sector. The issue, for me, is whether “choice” should include nonpublic as well as public schools?

I do not think that public resources should go to nonpublic schools because such a policy would further erode the public school’s already shrinking political base.

Q: You very eloquently made the point earlier on that basically the educational process happens between the student and the teacher in the classroom. A lot of resources go into preparation of teachers in the United States. How well do you think we do that?

DR. USDAN: I think we do terribly. I think that many, if not most, teacher preparatory institutions are not particularly relevant because they are not connected directly in a clinical way with the schools where the teaching/learning activity takes place. I think many schools of education have emulated the norms of the arts and sciences and have followed the research paradigm, instead of following the more applied clinical model of either the business schools or the medical schools, where you have clinical professors who have ongoing professional practices that are not removed from the reality of the real world.

My own sense is that teacher education drastically needs revision and reshaping. I think school systems themselves have to become more significant in the teacher education process, particularly in how the critically important student-teaching component is handled.

Q: You are associated with what we in the government world call an “NGO” [non-governmental organization]. How do you see your organization’s responsibility or contribution in addressing these education issues and challenges and opportunities?

DR. USDAN: The Institute for Educational Leadership (IEL) is a private, independent, nonprofit organization. We have no constituency in the traditional sense. We have been operating with the political, educational, and business worlds here in Washington and throughout the country. IEL has wonderful independence and an ability to play a catalytic role in surfacing issues. We serve as a connecting mechanism between schools and the larger world, and our programs relate to demographics, employment and training, connecting schools with health and social services, etc. because
the problems facing kids and families are going to require new kinds of multi-sector approaches. There is a profound difference between schooling and education, but many in our society, I think, view education as being merely schooling.

One vital part of education surely happens in the school building. But by the time a kid turns 18, some 91 percent of his or her time will be spent in a nonschool setting, with the family, with friends, sleeping, etc. Kids, as we know, spend infinitely more time watching television than doing homework. And so we have to pay more attention to the profound, nonschooling educational effects of other facets of the society.

Q: Is business’s interest in education going to have a major impact?

DR. USDAN: It already has had a profound impact. It has evolved in the last decade or two. The business and political communities increasingly are calling the shots. They are undergirding the standards movement, which really started in some ways with A Nation at Risk in 1983. In southern states, governors like Clinton in Arkansas, Hunt in North Carolina and Riley in South Carolina provided leadership in connecting schools with economic development. At the same time, we had wrenching economic transformations that were changing our society and our economy. We were losing our manufacturing base. We had to move from an industrial/manufacturing economy into an information economy. Educators and the new business and political leadership recognized that we no longer had jobs for large numbers of unskilled individuals. The schools now had to produce people equipped to handle a high-skill, high-standards economy.

The business community wants national standards. They want kids all over the country to be held to certain academic standards, and I think that is the way the country is moving. Kids know math, or they don’t know math. There isn’t a Virginia math or a South Carolina math or science. Look, for example, at the influence of the Business Roundtable, which has pushed this standards-based reform movement in state capitals all over the country. The Business Roundtable consists of 200 of the largest corporations in the country. They had never before gotten so extensively involved in education, but they now have corporations providing leadership in state capitals to push high educational standards.

So the business community has become very involved, and it has developed a natural alliance with political leadership. In many states this new politics of education has made the governor’s office or the governor’s education aide infinitely more important to education than is the chief state school officer. It is important to look at the demographics of the country. Only about 22 or 23 percent of the adults have kids in schools. Elected officials are going to respond to where the money and clout is. It is not with the kids! Thus, the business community becomes even more important politically.

New political coalitions must evolve, with the business community joining with parents and educators, in the new millennium. This is something that our organization will attempt to catalyze.

Dr. Michael Usdan is the president of the Institute for Educational Leadership, Inc. He has served as Commissioner of Higher Education of the state of Connecticut, and as president of the Merrill-Palmer Institute in Detroit. He has taught at Columbia University, City University of New York, Northwestern and Fordham Universities, and in schools in New York City and White Plains, New York. He is a member of the Editorial Advisory Board of Phi Delta Kappan magazine and he served as a member and president of the school board in New Rochelle, New York.

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GRADING U.S. EDUCATION TODAY

By William Peters

In the last 25 years, there has been a steady decline in the scores of U.S. students on standardized tests used to measure college and university applicants. Some observers see in this another indicator of the failure of U.S. education.

Not so, argues Gerald Bracey, a leading scholar of U.S. education. Bracey points out that a much larger percentage of total U.S. secondary-school students is now taking these tests. Twenty five years ago, the group tested represented the top quarter of U.S.
secondary-school students. Today, more than 60 percent of secondary-school students go on to college or university the following academic year. Most of these students are taking these tests. We are testing a much broader range of our students, so of course the average score has gone down.

Does this mean that U.S. colleges and universities are now accepting students who have no place in these institutions? No. Facile assumptions that the students of 25 years ago represented something of an educational golden era are not borne out by standardized graduate school admission tests, by employer experience, or by educational success rates, Bracey says.

Bracey and other analysts argue that the examples above demonstrate both the simplistic assumptions which have led many to conclude that U.S. education is in deep trouble, and the kind of more detailed analysis which is required to fully understand the current situation.

There are pockets of real trouble, and they get a lot of visibility. Some schools in poor districts of major cities are seriously failing their students and communities. The context of unemployment, family disintegration, community decline and violence is having an undeniable and destructive impact on community schools.

In some rural districts, rapid technological and economic change has translated to rapid demographic change, in turn challenging the traditional education funding sources for schools in these areas.

Society’s expectations of education are also changing. In 1950s America, society accepted an educational structure in which fewer than half of total students earned even a secondary-school diploma. Our labor market, with lots of pent-up demand for industrial production, had an abundance of opportunities for semi-skilled labor. Today’s employment picture is vastly different, and so are the educational needs and expectations of students and communities.

In addition, our expectations of whom we educate are continuing to change. During the last 15 years, well over half of the increase in educational spending has been directed at programs of “special education” for students whose physical, mental and emotional condition requires particular, often extra cost, support. These programs are very much in accord with the U.S. commitment to equal opportunity for all its citizens, but fulfillment of this commitment has come with a significant cost.

Fifty years ago, most primary and secondary students in the U.S. spoke sufficient English to handle their basic educational needs. Today, it is routine that 25 percent of students enrolled in schools in some of our largest states (California, Texas, New York) do not speak sufficient English to handle basic instructional processes. In the schools of Los Angeles and some other large cities, the number of non-English-speaking students approaches one half.

In addition, the range of first languages in some school districts is extraordinary. In one Washington, D.C., suburban school system, students come into the schools speaking some 81 languages. All of these students are entitled by law to public education; for these students, schools must provide not only the standard curriculum appropriate to their grade level, but also instruction in English which will enable them to function in those regular classes. And outside of the language needs, there are the diverse cultural backgrounds of these students and their parents. All of this constitutes a serious challenge to a healthy interaction between the schools, the students and their parents. Yet educators have long recognized that this interaction is one of the key factors needed for successful educational outcomes.

The above is not a litany of excuses for failing schools. But if we are to make the U.S. educational structure even more effective, as we must do, Bracey and others say, we must view and understand the structure in its complexity. Our picture must acknowledge areas of difficulty and areas of achievement. And there are very substantial areas of achievement.

In the late 1940s, educators and policy makers
assumed that no more than 20 percent of the populace could appropriately participate in higher education. Today, almost two-thirds of graduating secondary-school students go directly on to college, and participation in adult and continuing education is continuously expanding.

More students are being educated, to a higher level. Many schools are coping with an incredibly expanding knowledge base in creative and responsive ways. We should not despair, for instance, if we do not yet know exactly how to make the most appropriate use of personal computers in our educational institutions. It helps to keep things in perspective. IBM introduced their PC (personal computer) in the early 1980s. It takes time to train to new technologies, and we are only now coming into a time when teachers know computers as well as do most of their students.

Schools in this country do present both good and bad news, and we must acknowledge both. But the Clinton administration argues that our efforts to correct the deficiencies must not imperil the comprehensive public education system which has been so vital a player in the shaping of our nation. Understanding that we are coping with extraordinary challenges with some real success should reinforce our willingness to provide the intellectual and economic resources to correct areas of deficit, and take advantage of the opportunities of technology to produce an education structure for all citizens which the U.S. needs and deserves.
To Americans concerned about education, no term evokes stronger responses or conjures up more evocative images than “local control.”

In the not too distant past, the centerpiece of every community in the nation was the “little red schoolhouse,” the small building that was the symbol and substance of American commitment to mass public education. In many rural areas, the building had one room and one teacher for students of all ages; as recently as 1916, nearly one-third of the nation’s 620,000 schools had only one room, and while today fewer than 1,000 one-room schools remain, they are a vivid reminder of a more bucolic past.

What has not changed is the school as community focal point. As the frontier receded, the school remained as a community center, meeting place and rallying point for local interests and activities of all kinds, not just education. Today, in almost every American community, schools are used during nonschool hours for a variety of activities — meetings, handicraft classes for adults, senior citizen clubs, Cub Scout meetings, exercise classes, religious services and much more.

The idea of local control exerts a compelling hold on most Americans. In education, as in other walks of American life, the term means what it suggests: formal control is exercised locally, not by central government. In this regard, education is not alone.

The Constitution of the United States creates a federal system of government comprising three broad layers — national, state and local. The general theory underlying this complicated and sometimes overlapping network is that control of all government functions should be as close to the individual citizen as possible, and that each layer of government should do what it is best suited to do.

For example, the national government attends to matters of national defense, the money supply, international relations and other activities that are truly national in scope. The 50 state governments attend to those matters that they are best suited to deal with: state roads, highways and bridges; state courts and prisons; state colleges and universities, and the like. In turn, local government deals with those departments and activities which are uniquely local in character and scope, such as local courts, tax assessors, police departments and sanitation services. Historically, schools in the United States have been maintained by local government.

The roots of this tradition are found in two aspects of colonial American life — one a practice of long standing, the other a habit of mind.

The practice was rudimentary education for the masses, a product of the religious pietism of the New World. Central to this particular religious experience was the belief that man may commune directly with God without the need for priestly intermediaries. Protestant pastors, to use modern terminology,
facilitated the religious experience, but they did not create it.

In the Protestant traditions, then, it was essential that all communicants be able to read the Scriptures. Revealed word had to be accessible to the congregation as a whole. Thus, the first public school in America was established in the Commonwealth of Massachusetts in 1645, authorized under the terms of a statute enacted by the colonial legislature. Education was not an indulgence; it was central to the Protestant experience.

The habit of mind important to understanding the role of education is a disposition to cooperate and collaborate. It is a product of the dual American commitment to liberty and equality. Men who are both free and equal respect one another and work together freely, as equals. In the original colonies, and later on the frontier, this idea was subject to the test of reality, and it was clear that it worked. Americans at the local level cooperated in most of what they did; raising roofs, making quilts, holding town meetings, participating in clubs and voluntary associations were the product of democratic cooperation and collaboration.

The great French observer, Alexis de Tocqueville, was impressed, above all else in America, by this “passion for association.” It was not the man on horseback that impressed de Tocqueville, but people working together in fraternal associations, clubs, committees, town meetings and, above all, self-government.

These twin commitments — a commitment to learning for everyone and habits of collaboration and cooperation — set the stage for the theory and practice of local control. To this day it is based on the belief that a free and equal people knows best its own self-interest and has the capacity, voluntarily, to cooperate and collaborate to secure it.

America’s founding fathers reflected this multifaceted view of education, believing it to be vital to the life of the new nation.

Thomas Jefferson envisioned a free and equal people who would govern themselves and renounce the hereditary privilege of the Old World. A “natural aristocracy” of talent would arise and accomplishment would be limited only by the energy and discipline of the individual. While social classes would not disappear, the hereditary social class system would. Individuals would rise or fall on the basis of individual talent. Personal industry and enterprise would determine destiny.

Such a vision required mass education for its realization. The Founders were convinced that a free people could protect their freedom and enlarge its scope only if they were educated. Only if individuals are educated can they realize their potential.

But while Jefferson and the other framers of the U.S. Constitution thought that education was important, they also believed that education was a local responsibility, properly exercised and led by the community. Education was not to be imparted by central authority; it was to be acquired by the people themselves.

The Constitution is deliberately silent on the question of education. In that document omission was as important as commission, because the Tenth Amendment, known as the “Reserve Powers Clause,” reserved for the states all powers not specifically the responsibility of federal government. As a consequence, the 50 states — not the federal (U.S.) Government — are responsible for education.

The constitutions of each of the 50 states DO make explicit reference to education, and spell out the states’ financial, organizational and pedagogical responsibilities in some detail. As a legal matter, then, local school districts are creatures of the state, and the powers they exercise are theirs because the states have deliberately delegated them to the local authority. And that which is delegated under state authority can also be taken away by the state.

Whereas states can force local school districts to respond to their policy directives, the United States Government has no such relationship with either states or school districts, at least in matters of
curriculum, pedagogy or textbooks — or standards for teachers or students. Only in those areas in which federal questions arise — as in the case of citizens’ civil rights — is there any national government jurisdiction. Thus, if the rights of a racial minority are ignored at the local level, Washington must step in.

This is what occurred in the 1950s and 1960s, in the throes of the civil rights movement, when the Supreme Court of the United States ruled that `separate but equal’ school facilities for minorities were unconstitutional. The U.S. Government initiated a long-term process to enforce integration.

The national government’s role was also expanded in the 1960s when President Lyndon B. Johnson, in his ‘Great Society,’ determined that there was a broad national interest in subsidizing certain components of school life — such as nutrition and early education — for disadvantaged students. Washington made available to the states substantial funds for these purposes. With the funds came federal controls. Today, more than three decades later, a national debate centers on the degree of control from Washington that should accompany these grants.

With all this, however, fundamental education issues — what is taught, who teaches, under what conditions and for what salary, how one measures what is learned, the terms and conditions of advancement and graduation, which textbooks are used and how they are adopted — are all state and local questions.

Over the past 200 years, therefore, the different levels of government engaged in education have come to work together and cooperate. For example, in the case of education, the national government in Washington provides, on average, seven percent of the revenues received by local schools; state and local governments provide the rest. Nevertheless, local school districts jealously guard their prerogatives and privileges. In fact, so deeply embedded is support for local control that no constituency group favors abolishing it.

Whenever the national government adopts legislation that affects local schools, the legislative preamble invariably cites the importance of local control and the desirability of preserving it. A recent article on education in the quarterly journal *The Public Interest* noted, “that local control is a good thing is assumed.... Critics and dissenters are few and, perhaps, eccentric.”

To further understand the importance of local control in American education in the 1990s, it is necessary briefly to sketch in the scope and scale of American primary and secondary education. Today nearly 46 million youngsters in 50 states attend schools that are organized into more than 14,000 independent school districts. While 14,000 may seem a large number, as recently as 1940 there were more than 117,000 school districts. Today, only Hawaii, the newest state, has a statewide school system. By way of contrast, California and Texas — both populous — have more than a thousand school districts apiece. Delaware and Nevada, which have smaller populations, have fewer than 25 districts each.

A century ago all the nation’s school districts were small. Today 60 districts enroll more than 50,000 students each, and the biggest districts are truly enormous. New York City, for example, enrolls more than a million youngsters, and Los Angeles, the nation’s second largest city, enrolls more than half a million.

Local boards of education oversee school districts. The members of local school boards, variously known as trustees or board members, are elected — in the vast majority of cases — by voters. In only a few cases are they appointed; when they are, the appointing power is an elected official.

At the state level, state boards of education oversee the activities of local school districts. In addition, each state has an educational administrative head, who may be called the chief state school officer, superintendent of public instruction or commissioner of education. In some cases the commissioner is elected, as in California or Florida; in other instances, the commissioner is appointed by the governor or the state board of education.
Whatever the selection process, state governments determine the ground rules for local school districts. They determine the number of days that schools will meet — typically 180 days per year. They establish minimum state standards for licensing teachers and administrators; they identify a core curriculum; they may identify which textbooks should be used; and occasionally buy or print textbooks and distribute them. In addition, they usually set standards for issuing diplomas upon graduation.

But the most important power that the state wields is financial. Not until the late 19th century were any state monies made available for education; the lion’s share was always raised locally, typically by taxes levied on real property. An extreme example survives: In New Hampshire, one of the original 13 states, 95 percent of revenues for schools are raised locally.

Today, most states provide substantial revenues for local schools, and the type and amount of local tax levies are authorized by the state. A school system with a generous budget can devote more money to courses with small enrollments, such as advanced mathematics or difficult foreign languages, than can a school with a modest budget.

As a consequence, a state’s threat to withhold money if a local school district refuses to abide by state law or rule is a potent incentive. For example, in 1985, the state of Texas adopted a “no pass, no play” rule. Under terms of this law, students cannot engage in extracurricular activities, such as sports or musical ensembles, if they do not maintain their grades. If a school district fails to comply, the local superintendent does not face jail; rather, his school district loses its state funds — a catastrophe that would paralyze his schools.

While the formal authority of state boards of education and state commissioners appears to be great, all local school districts enjoy substantial autonomy and independence. They all develop budgets, establish pedagogical objectives, identify areas of curricular and extracurricular emphasis, adopt regulations and procedures, and hire and fire staff. Typically they are responsible for the design, construction and maintenance of their school buildings. Most deal directly with other special-purpose units of government as well as local, state and federal officials. If something goes wrong, the local school district and the superintendent, not the governor, are plaintiffs in lawsuits. And if weather conditions such as heavy snow or tornadoes are forecast, the local superintendent, not the mayor or governor, must decide whether to close school.

The habits of local control are still strong enough to exert a restraining impulse on state legislators and governors. In addition, there is a strong resurgence of interest in local control for pedagogical and professional reasons. Recent education research in the United States overwhelmingly supports the idea that decisions about pedagogy and certain elements of education content are best made locally. The research findings of sociologist James Coleman of the University of Chicago, who studied American public and private schools, confirm the work of Michael Rutter, who studied schools in England. Decisions about pedagogy and content are best made by the teachers, principals and families who make up the school. Working together, they establish the ethos of high standards and high expectations, something that cannot be done by fiat.

How-to-teach decisions are not suited to centralized orchestration and control; indeed, in the American tradition, many believe “what to teach” should also be decided locally — reflecting, among other things, the significant regional variations in modern America. For example, two port-of-entry cities, New York and Los Angeles, house more than one million immigrants each. The enormous ethnic, cultural and linguistic diversity of these youngsters alone requires locally tailored responses to their educational needs and interests.

Of equal importance in the modern history of local control is the emergence of strong local teachers’ unions. Bargaining units represent teachers at the local level, where crucial decisions about salary, conditions of work, curriculum and staffing are made. So deeply ingrained is this process that there is no statewide bargaining; neither is there national bargaining, notwithstanding the fact that local unions are organized as part of both state and national associations.
The adage that “he who pays the piper calls the tune” is nowhere more true in American life than in education. When local communities raise most of the money for their local schools, they are strongly committed to local control and hostile to state or federal intervention. It is not surprising, then, that as the states have played a more active role in financing education over the past several decades, they have also begun to exert more state control over education, slowly but surely chipping away at the time-honored tradition of local control.

The 1980s brought the emergence in America of the “excellence” movement, a product of public concern that the schools have let academic standards slip. It provided another role for the national government. The most important event in this movement was the publication of *A Nation At Risk*, a report commissioned by the U.S. Secretary of Education. A panel of Americans from all walks of life asserted in the report that low education standards had reached crisis proportions. While the report was strongly worded, the general view it expressed was widely shared by the public at large and elected officials, particularly among state legislators and governors.

It is one thing to want to improve education, but quite another to do it successfully. The excellence movement has prompted most state legislatures to require local schools to meet higher standards of academic accomplishments. While this is a most attractive and desirable goal, it is very difficult to achieve by edict. For better or worse, students cannot simply be ordered to do better. Improved student performance is a dynamic process that takes place not just at the local government level, but at the level of the individual student. Incentives and disincentives, rewards and punishments, can be designed to change student behavior, but in the final analysis students must be responsible for their own conduct.

While local control, in some places and circumstances, is being challenged by state governments, either explicitly or implicitly, state control is still exercised through democratic processes. What the people do they can undo, and if history and experience are a reliable guide, the practice of local control, so deeply ingrained in the American experience, will endure.

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Students and educators are able to access more information, and at a faster rate, than ever before. In a world that is increasingly interdependent, economically and otherwise, students must learn more about the rest of the world, and new technologies enable them to do so more than ever before. In a world that increasingly relies on technology, students are becoming familiar with new technologies at an early age. The Internet gives people of all ages — no matter where they attend school or even if they do not attend a formal school — direct access to a vast number of informational sources around the world. The rapid pace of technological change and the sheer volume of information available present new challenges to educators, students and others involved in learning.

Dr. Barbara Means and Dr. Seymour Papert have been perceptive observers of the expanding relationship between technology and education. Recently, they reflected on this phenomenon.

**QUESTION:** Many children in the U.S. already have experience with computers (either through games or through “serious” learning programs) long before they enter school. How will this familiarity with technology affect the students and adults of the future?

**DR. MEANS:** Students’ increasing familiarity with technology use offers a great opportunity for schools, if schools and teachers have the wisdom and self-confidence to take advantage of it. Rather than trying to learn how to use every new piece of software and Internet tool themselves and how to do all of their own systems administration and troubleshooting, teachers can start to think of themselves as instructional designers and managers, with interested students contributing needed technology skills. Teachers who are confident enough to focus on the content, student diagnosis and assessment aspects of classroom activities while letting students who happen to have needed technical expertise help their peers master the technical aspects of using software or the Internet, have many more options for technology use in their classrooms. In addition, this kind of collaboration, with different individuals contributing different kinds of expertise, is a good model for the kind of “learning community” that many education reformers advocate.

An interesting example is Generation WHY, a Technology Innovation Challenge Grant project. This project is training high school students in how to work with teachers in helping to implement technology-supported instruction in their classrooms. The students receive training, not only in technical skills, but also in consulting skills to prepare them for working with their teacher clients.

There’s a tremendous opportunity here as long as current school staff are not so anxious about “losing control” or “not knowing everything about class content” that they fail to take advantage of the burgeoning student skills. At the same time, there is a serious equity issue. Not all students have home access to computer technology and even with prices coming down the disparity is likely to continue. It is precisely because of this disparity that school access to using technology tools is an important public policy issue.
DR. PAPERT: It is quite obvious that in the long run the lives of children will be radically changed as a result of the presence of computers or digital media or whatever the descendants of our computers will be called in the next generation. The most promising direction of change is acquiring greater independence as learners. Children will grow up knowing that they can learn what they need to know when they need to know it.

Q: Some educators feel that the presence of technology in society is a major factor in changing the entire learning environment. How can schools keep pace with technological changes, and what are the implications if they do or do not? Are they lagging behind? How important are questions of physical access to technology and the ability of educators to understand and convey understanding of the technology?

DR. PAPERT: It is obvious that schools are lagging behind deep changes in our society. They are still organized on the model of production line factories. The deepest reason for the lag is neither the lack of physical technology nor the ability of educators to understand its meaning. The biggest reason is the built-in self-preservationist conservatism of the education system. To my mind the best analogy is the way the Soviet bureaucracy held on to power even though it could see that its economy was going downhill fast. It gave up only when it was in total collapse. I hope the education system is able to change before it collapses.

DR. MEANS: Many have argued that schools lag way behind the business and government sectors in the effective use of technology. Certainly the average classroom today is not very different from the average classroom of 40 years ago and we would not say that about very many businesses. Nevertheless, if we take the age of the staff into account, I do think that many teachers are ahead of their peers in the general public when it comes to the use of technology. The main concern is not one of physical execution of the steps in using technology but rather a matter of seeing technology’s potential to serve specific educational goals and having the time, creativity and courage to try to capitalize on that potential.

Many of us are calling on teachers to move away from cookbook approaches of lectures and totally scripted student activities toward teaching styles where students have much more latitude in exploring questions they care about, conducting research and creating presentations using technology tools where appropriate. Such approaches call upon teachers to be activity designers, consultants and coaches as well as skilled diagnosticians and evaluators of student work. It is the preparation for these roles that requires so much time and effort.

Q: How will technology change the nature of teaching, including what is taught, where it is taught and who does the teaching? For example, Arthur Levine of Columbia University asked, in a recent article, whether the ability to teach electronically means the end of the need for the physical plant called the campus. He suggested that the best instructors could teach across state boundaries and across large distances.

DR. MEANS: As I’ve argued, if students use technology as tools and communications devices to engage in complex projects and investigations, teachers take on a role quite different from that which dominates today. Teachers will spend less time lecturing and doing rote grading and more time designing, facilitating and coaching.

The World Wide Web is opening up possibilities for new kinds of learning at a distance but I, for one, am not predicting that physical plants and face-to-face contact will wither away. Studies of groups of people collaborating through telecommunications have found repeatedly that an electronic group is more likely to maintain itself if members have had some face-to-face contact. Although we can now have synchronous communication through video conferencing and multi-user virtual environments, most of us still crave the nuances and subtleties of face-to-face contact.

Technology is a wonderful complement when such face-to-face contact is inconvenient, expensive, or impossible, but I believe that given a choice, people will continue to opt for opportunities to learn in a face-to-face (as opposed to virtual) social setting. I do think, however, that we will see exciting and
engaging teaching (with credit for courses and granting of degrees) through the World Wide Web and other new technologies; this will put pressure on those providing in-person education and training services to do a much better job.

**DR. PAPERT:** The best teacher is someone who brings personal knowledge, warmth and empathy to a relationship with a learner. The effect of the new technologies is to provide better conditions for such teachers to work directly with their students. Of course tele-teaching has a role, but I hope it will never be the primary form.

**Q:** Will advances in technology affect the involvement of the private sector in education, both in terms of support and expectations of the qualifications students should have when they graduate? Do you see more of an emphasis on technical, rather than liberal arts education, even before the university level?

**DR. PAPERT:** I believe that the development of the knowledge-based economy will bring recognition that the most important qualification is not technical knowledge but the ability to learn and to work independently. To foster this we need to replace lock-step curriculum-driven schools with the kind of flexible learning environment made possible by the new technologies.

**DR. MEANS:** We are seeing increased private sector involvement in education, particularly in major initiatives involving technology. In my experience, however, the private sector is not asking schools to turn out students with greater technical proficiency. They believe students can get those skills in post-secondary training or within industry itself. What they want are students with strong basic skills and with the “new basics” of learning to learn, collaboration and effective resource utilization.

**Q:** So far, we have only talked about access to the Internet. Would you speculate on how other technologies could affect American education?

**DR. PAPERT:** I was not talking about access to the Internet. I was talking about something much deeper in which computers serve as materials for construction as well as providing access to knowledge. For example, in collaboration with the Lego company (toy manufacturer), I and my colleagues at MIT have developed little computers that can be incorporated in the models that small children build. Thus they make behaviors as well as physical structures. When, as will soon happen, such devices become widely available, they will enormously increase every child’s opportunity to know what it is like to carry out a complex project using very advanced ideas from engineering and from psychology.

**DR. MEANS:** Computer modeling makes it possible for us to represent abstract concepts through concrete visual images that can be manipulated. We are only beginning to explore the tremendous potential of such technologies to make what we have regarded as difficult subject matters much more accessible; for example, teaching calculus to middle school students. There is tremendous potential here, if we invest in solid research and development, to understand how best to support learning with the new technologies available to us.

**Q:** How will the technologies we have been discussing affect other countries, especially underdeveloped countries which do not have the economic resources of the United States, Japan and Europe? Is the technological revolution, the information highway, something that will benefit primarily the more developed countries of the world?

**DR. MEANS:** Many developing countries are starting to look at educational uses of technology as an important strategy for economic development. Learning from the lessons of more developed countries that invested in technologies and approaches that are now considered out of date, they are hoping to “leap frog” into advanced technology uses in ways that pay off for economic competitiveness. Also, you could argue that information technologies may have a greater effect in countries with limited resources. Consider the potential value of an Internet connection in a country that cannot afford to buy textbooks, let alone stock libraries for their secondary schools. Suddenly their
students have access to a world of information resources!

DR. PAPERT: This is not a matter for speculation about what will or will not happen. It is a matter for decision. I think it would be very foolish of the developed world to lose the chance to help the developing world acquire the benefits of the new kinds of learning environments. I myself have joined with Nicholas Negroponte and a few others to create an organization called the 2B1 Foundation to serve this purpose.

Q: Universities are already interactive in many ways, but do you think that education can be globalized, or will we continue to stay in our linguistic and cultural boxes?

DR. PAPERT: It will eventually be globalized but the conservatism inherent in universities as organizations will probably result in wasteful delays.

DR. MEANS: My experience in studying projects involving participants from multiple countries suggests that even given all the options afforded by the Internet, you need to give teachers a very compelling reason to want to collaborate with teachers from other countries and language groups to get any kind of sustained participation. There is great interest in international collaboration in concept, but a limited number of teachers that really follow through unless you find the right hook. But such hooks can be found, for example, in tracking the effects of El Nino across countries.

Q: We've talked about how technology is shaping education. Is education also shaping technology?

DR. PAPERT: Unfortunately not. I think that it is shameful that the education world has allowed the computer industry to impose its idea of what a computer should be and how it should be used.

DR. MEANS: Unfortunately, the education market is so dwarfed by the business and home technology markets that it has had a relatively small impact on the design of technology. The technologies we are using in schools today were designed primarily for offices. Experts in educational content and in how children learn are rarely involved in technology development. Improving upon this situation is one of the goals for the Center for Innovative Learning Technologies, a new research consortium consisting of SRI International, the University of California at Berkeley, Vanderbilt University and the Concord Consortium (with funding from the National Science Foundation). Through an Industry Partners Program, researchers in this center will be bringing their research on the most effective uses of technology and on student and teacher technology needs to the corporations that develop new technologies and software.

Q: Dr. Papert, you stated (in testimony before the United States Congress) that the cost of technology is exaggerated in the minds of education policy makers. Could you please elaborate?

DR. PAPERT: The cost is a matter of simple arithmetic. The cost of giving every child a $750 computer with a five-year life would add only 2 percent to the average cost of educating a child in the United States. With a little R&D [research and development], the computer industry could easily halve or quarter that number.

Q: Dr. Means, one of your books is entitled Technology and Education Reform: The Reality Behind the Promise. Do you think there's any danger that expectations for results are too high, or, conversely, too low?

DR. MEANS: John Doerr, a Silicon Valley venture capitalist who has underwritten many of the most successful new technology start-ups over the last 15 years, argues that the Internet is seriously under-hyped. We do not yet have a full appreciation of how this system of communication will change our homes, offices and schools. He may be right. The problem is that technology-driven change often is not linear. It is very difficult to foresee on the basis of extrapolating present trends. I don't claim any great accuracy as a visionary, so I'll give you an extrapolation of what I see now.

Many members of the general public have a strong belief in technology's power to transform education either because of technology's "mystique" or because they have experienced technology's power in other settings. There are problems when technology is brought into school systems with high expectations but no clear thinking about how or why it is to be used. The power is not in the technology per se but rather in the social and instructional context it can support. The opportunity to infuse
technology into a school can become a catalyst for rethinking how the school should structure its use of time and personnel, what it’s trying to teach students, and how its staff believes students learn and can demonstrate their understanding.

Q: Finally, perhaps you could summarize your thoughts on technology and education — where we were, where we are, and where we are likely to go in the future.

DR. MEANS: Taken together, the continued exponential advances in information technology, huge interest in network technologies, our increasing understanding of human cognition, and the widespread concern for educational quality provide the elements for what could be a decade of educational revolution led by technology.

New network technologies could foster collaborative learning between peers anywhere, involve new players in the support of student learning (e.g., scientists, retirees, experts) and end the isolation of classrooms from real-world concerns and resources. It should be possible to offer a rich selection of world-class courses and learning activities to anyone, anywhere. Informal learning through collaboration with people who have important kinds of expertise should be a major facet of learning in schools, on the job and at home.

All of this should be possible, but we are not yet there either on the technology or the organizational infrastructure front. Electronic conferencing software has been awkward and largely restricted to text. Threaded discussion groups have proven difficult for novice learners to understand and use. We are just beginning to see applications that combine synchronous and asynchronous communication in ways that support learning and professional development (see for example, SRI’s TAPPED IN, a virtual teacher professional development institute, which can be found on the World Wide Web at http://www.tappedin.sri.com/info/about.html). The next decade is sure to be an exciting one in terms of technological advances and in terms of increased knowledge gained from early efforts to harness these capabilities in the service of education.

DR. PAPERT: Let us make a comparison with some other technologies. When the movie camera was invented, its first use was pretty close to putting the camera in front of a stage on which actors performed as they always had. It took a long time for camera-aided theaters to turn into what we now know as cinema and television. The use of technology in education is mostly at the first stage, in which technology is used to enhance what people did before without it. In the next two decades, we will begin to see change in how people think about learning as deep as the changes technology has brought to how we see entertainment. This will be much, much more than putting a lot of computers in otherwise unchanged schools teaching an otherwise unchanged curriculum.

It is impossible to predict what the school of the future will be. History always outsmarts the futurists. But it is easy to predict what it will not look like. I am sure that the practice of segregating children by age into “grades” will be seen as an old-fashioned, and inhumane, method of the “assembly line” epoch. I am sure that the content of what they learn will have very little in common with the present day curriculum.

Dr. Barbara Means is Vice President of the Policy Division of SRI International, a California-based research, technology development and consulting firm that recently received a grant from the National Science Foundation to fund a Center for Innovative Learning Technologies. Dr. Means is co-author of Technology’s Role in Education Reform (1995), and editor of Using Technologies to Support Education Reform (1993) and Technology and Education Reform: The Reality Behind the Promise (1994), among other works.

Dr. Seymour Papert is a researcher at the Media Lab of the Massachusetts Institute of Technology (MIT). Dr. Papert headed the Media Lab’s “School of the Future” project, which included studies on “Children's Learning of Computational Ideas in a Multicultural School” and “Technological Fluency,” the latter focusing on the study and development of technological fluency in pre-college students. An early pioneer of Artificial Intelligence, Dr. Papert co-founded MIT’s Artificial Intelligence Lab in the early 1960s. He is creator of the LOGO programming language and author of several books and articles, the most recent being The Connected Family: Bridging the Digital Generation Gap (1996).
America’s economic, national and international security demand quality education. The size and diversity of the country’s educational system, however, make the effort toward world-class education for all a continually challenging and often controversial endeavor. What follows is a sampling of recent commentary from a variety of sources.

**PRESIDENT BILL CLINTON**

...[W]e will never get to our one America in the 21st century unless we have both equality and excellence in educational opportunity. We have to give every American access to the world’s best schools, best teachers, best education. And that means we have to have high standards, high expectations and high levels of accountability from all of us who were involved in it....This year, on the International Math and Science Tests given to 4th and 8th graders, for the first time since we began a national effort to improve our schools over a decade ago, our 4th graders — not all of them, but a representative sample, representative of race, region, income — scored way above the national average in math and science — disproving the notion that we cannot achieve international excellence in education even for our poorest children. It is simply not true. (Excerpted from the President’s address to the National Association of Black Journalists, July 17, 1997, Chicago, Illinois.)

**SECRETARY OF EDUCATION RICHARD W. RILEY**

...[S]tudents’ proficiency in science and math is up about one grade level compared to what it was a decade ago. One reason we have been behind countries such as Japan is because that nation’s public schools always have put extremely heavy emphasis on science and math. We still have a long way to go.

Also, I don’t think we can discount the diversity factor we have in this country. We’re a nation of many cultures and creeds and influences, and what seems important among one group or location may not be a priority elsewhere. In countries such as Japan, where there is little diversity in the culture, it is easier to motivate students toward common goals. (Excerpted from “Raising the Standards,” The American Legion Magazine, April 1997, p. 60.)

**GERALD W. BRACEY**

(Gerald W. Bracey is author of Setting the Record Straight: Responses to Misconceptions about Public Education in the United States, Association for Supervision and Curriculum Development, 1997.)

The biggest threat to the American educational system may come not from within our schools but from the depth of our divisions over what exactly they should accomplish and how best to get them to accomplish it. And our divisions will not be healed as long as we ignore the history of the accomplishments that have already been made. We should begin improving our schools by appreciating how well they have, in most places and at most times, done so far.... [U]ntil after World War II, it was assumed that no more than 20 percent of American youth could handle a college curriculum at all; now 62 percent of all high school graduates enroll in college the following fall. (Excerpted from “What Happened to America’s Public Schools?,” American Heritage, November 1997, p. 52.)

**PETER SCHRAG**

(Peter Schrag writes frequently on education.)

Mixed reports don’t make for good headlines, and qualified good news undermines the sense of crisis essential both to liberal demands for more money and to conservative arguments that only vouchers and other radical solutions will do. High school completion rates — now roughly 90 percent — and college graduation rates are the highest in history. One in four adult Americans has at least a bachelor’s degree — the highest percentage in the world (and...
the percentage keeps getting higher). A larger percentage of 22-year-olds receive degrees in math, science, or engineering in the United States than in any of the nation’s major economic competitors....Because of reforms instituted in the 1980s, more American high school students than ever before are taking four years of English and at least three years of math and science....A growing number of people, in the name of world-class standards, would abandon, through vouchers, privatization and other means, the idea of the common school altogether. Before we do that, we’d better be sure that things are really as bad as we assume. The dumbest thing we could do is scrap what we’re doing right. (Excerpted from “The Near-Myth of Our Failing Schools,” The Atlantic Monthly, October 1997, p. 72.)

GARY R. GALLUZZO  
(Gary R. Galluzzo is dean of the Graduate School of Education, George Mason University, Fairfax, Virginia.)

The privilege for parents to choose their child’s education is probably an inevitability in the not-too-distant future....Certainly, schools supported by vouchers or charter schools provide opportunities to explore alternative arrangements, which are sorely needed on the education landscape. The idea of choice also provides options beyond selecting the school, and they compel me to wonder where the choosing stops.

...[I]f I can choose the school, I should be able to choose the curriculum the school offers....If parents can choose the school, can they choose the teachers with whom their children will study? And if they find that they don’t like one or two teachers, can they choose different ones in October?...[I]f choice is our future, then what is it that makes our nation or any state in the Union a commonwealth? What will bind us together other than the pursuit of choice?...What happens when individual, ideological pursuit is the game, and our children are the pieces we move about?...

Choice will only create a new set of problems to solve in a new arena, and it too will be as tyrannical as the current monopoly on compulsory education without choice, just in different ways. (Excerpted from The Washington Post, Nov. 17, 1997, p. A23.)

STEPHEN J. TRACHTENBERG  
(Stephen J. Trachtenberg is President of The George Washington University, Washington, D.C.)

If, as Americans, we are now part of an international economy...and if that international economy values most of all the literate, self-driven worker who, seated at a computer console of some kind, continuously monitors the work processes in which he or she takes part...then the schooling that encourages participation and initiative rather than rote learning is also the schooling that helps each of us and all of us to survive economically....(Excerpted from an address to The Secretary’s Open Forum of the U.S. Department of State, Nov. 3, 1997.)

STEVE WULF  
(Steve Wulf is a Time Senior Writer.)

What makes a good school? There are no stock answers, like wardrobe or testing or size. But there are some universal truths. A good school is a community of parents, teachers and students. A good school, like a good class, is run by someone with vision, passion and compassion. A good school has teachers who still enjoy the challenge, no matter what their age or experience. A good school prepares its students not just for [standardized aptitude tests] but also for the world out there. (Excerpted from “How to Teach Our Children Well,” Time, Oct. 27, 1997, p. 64.)

JEFFREY R. YOUNG  
(Jeffrey R. Young writes for The Chronicle of Higher Education.)

New technologies could take over many of the instructional duties that now define professors’ jobs, according to faculty members who are peering into the future. Some of them are alarmed by what they see, while others are encouraged.

Among the latter are faculty members — joined by some administrators — who expect that teaching will become more efficient, and that students will benefit, as parts of the professor’s job are taken over by multimedia software, recorded lectures and other high-tech tools. Professors could end up having more time to do the things they do best, these people suggest.

Others — even some faculty members who use
technology in their classrooms already — worry that professors will be left on the sidelines. Publishing companies and brand-name universities, they fear, could team up with a handful of well-known scholars to market lectures, and even entire courses on CD-ROMs and World Wide Web sites. The quality of education, these critics say, could erode. ‘Doing away with human contact would be disastrous,’ says Mary Burgan, general secretary of the American Association of University Professors. She says she’s afraid administrators see technology as “a cheap, quick fix” for complex problems in higher education. (Excerpted from The Chronicle of Higher Education Web site, http://chronicle.com/colloquy/97/unbundle/background.htm.)

JASON CHERVOKAS & TOM WATSON
(Jason Cervokas & Tom Watson write for Cyber Times)
The [Inter]Net is both helping and changing the home-schooling movement in America. [Editor’s note: Home schooling is the educational alternative in which parents/guardians assume the primary responsibility for the education of their children. Recent figures show that between 750,000 and 1 million school-age children are being educated at home.] Because it makes educational resources more easily available, the Net dramatically increases the access to information for students learning at home. But because it makes community-building easy, the Net is helping to foster communities of home-schooling families that could go a long way toward building a consensus among this very disparate group on curriculums and teaching techniques.

In short, these communities are building alternative school systems and facing and solving the problems of community schooling not from a government mandate, top down, but from the ground up....

Whether or not home schooling is a good idea remains a topic of intense political and social dispute. Is it better for students to be taught in a socially uncontrolled environment according to a government-mandated curriculum? Or is it better for students to be educated at home or in small communities of like-minded, nonprofessional educators? (Excerpted from “Internet is Nurturing Home Schooling,” The New York Times on the Web: Cyber Times, Sept. 5, 1997, http://nytimes.com. can be reached via electronic mail at: nation@nytimes.com.)

MARIANNE MEANS
(Marianne Means writes for Hearst Newspapers.)Vouchers raise enormous constitutional questions about the potential violation of our traditional separation of church and state. They reduce rather than enhance accountability since unlike public schools, private institutions are free to pick students and expel them at will, are subject to only minimal public scrutiny and have no obligation to pluralism, financial diversity, democratic control or even standard academic standards....

[There are good public schools all over the country in middle- and high-income neighborhoods. A voucher-driven federal raid on scarce school funds would be a terrible thing. Meanwhile, inadequate public schools would be further weakened as the best students escaped to private entities and left only the poorest, most troubled students behind. (Excerpted from “The Wrong Choice About Schools,” The Orlando Sentinel, Aug. 25, 1997, p. A-11.)

RICHARD LACAYO
(Richard Lacayo is a Time Senior Writer.)Of the 52 million schoolchildren in America, fewer than 8 million attend private or parochial schools. Of those, fewer than 20,000 are using vouchers to help cover their tuition. And only two cities, Milwaukee, Wisconsin, and Cleveland, Ohio, use tax dollars to supply the vouchers. ... Supporters [of vouchers] ask why the poor should not have the same chance at private schools as the better-off. Though it’s too soon to tell whether most voucher-supported students perform better academically in a private school, no one needs a study to show that most private schools are safer and more orderly. For inner-city parents, vouchers can represent salvation from a system in perpetual disrepair, even if they offer just a fraction of poor children a way into the lifeboat of private schooling. (Excerpted from “They’ll Vouch for That,” Time, Oct. 27, 1997, p. 73.)
Many state universities and community colleges have long delivered courses via television, and recently via the Internet. These courses are usually designed to extend education to regions where opportunities are limited, and offer courses leading to associate, bachelor’s or master’s degrees. The author says the elite private institutions are experimenting with distance-learning to provide more specialized degree programs, professional-school courses, and courses that can be exported internationally.

A new teaching and learning paradigm, probably based on the World Wide Web, will be at the core of the Information Age university. Faculty must be given appropriate equipment and support in their use of the technology to design and develop materials and instructional interaction that will take place in this new environment. With appropriate support, the transition can be positive; without it, the authors warn, less effective educational programs will be developed, and students and faculty will be disappointed with the outcomes.

The answer to the title question, says the author, is much better news than many expect. Bracey argues that “two qualities common to educational reformers since World War II [are] nostalgia and amnesia,” and these ill serve the objective analysis of America’s education scene. The U.S. secondary school graduation rate didn’t exceed 50 percent until mid-century; today it is 83 percent. After World War II education experts assumed that “no more than 20 percent of American youth could handle a college curriculum; now 62 percent of all high school graduates enroll in college the following fall.” Today most educational statistics continue to show what Charles Silberman (author of an incisive 1970 report “Crisis in the Classroom”) found 25 years ago: Now is better than then. Of nine major trends in reading, mathematics and science, seven are at all time highs, reports Bracey.

Educational consultant Dale Coye looks at several recommendations made by the late American educator and former State University of New York Chancellor, Ernest Boyer. These include clarifying the curriculum, connecting the classroom experience to the outside world, and creating a campus community that brings professional schools and the various departments together in an integrated academic setting. Coye notes that some of Boyer’s recommendations, particularly those that include real service to the people living in and around an academic institution, are already being implemented across the country. Coye hopes that Boyer’s sense of a “connected” American college will be promoted throughout America.

This pair of articles examines two views of the state and uses of a classic “liberal education.” In “As Lite Entertainment for Bored College Students,” Mark Edmundson, a humanities professor
at the University of Virginia, an elite public university, says the university has gone into the business of attracting students who have been brought up in a consumer culture. He argues that in trying to attract students, universities are more concerned about the quality of their gymnasiums, the entertainment value of their humanities courses and the popularity of their teachers than they are about the substance of their courses. The main reason, says Edmundson, that students continue to take humanities courses (which are not perceived as being marketable when they graduate) is because humanities professors grade more liberally in order to keep students in their classes.

In the second article, "As a Weapon in the Hands of the Restless Poor," Earl Shorris, book author and contributing editor to Harper's magazine, discusses his experience in enticing top-flight professors to teach at a kind of mini-college for the humanities that he established for the very poor. Historically, "If the political life was the way out of poverty," the author posits, "the humanities provided an entrance to reflection and the political life." Shorris began his mini-college with 20 students, 16 of whom graduated. A year after graduation, 10 were attending four-year colleges or going to nursing school and four of the 10 had received full scholarships to Bard College, a prestigious private school.

Epper, Rhonda Martin. COORDINATION AND COMPETITION IN POSTSECONDARY DISTANCE EDUCATION (The Journal of Higher Education, vol. 68, no. 5, September/October 1997, pp. 551-587) This comparative case study of Minnesota, Maine and Colorado addresses state policies governing postsecondary distance education. It reveals new relationships between state policies, institutional distance education programs and external competitive forces. In each state, distance education expanded the market for postsecondary education, raised leaders’ awareness of outside competition, and challenged traditional regulatory principles of statewide coordination.

Lazerson, Marvin. WHO OWNS HIGHER EDUCATION: THE CHANGING FACE OF GOVERNANCE (Change, vol. 29, no. 2, March/April, 1997, pp. 10-15) Lazerson, the University of Pennsylvania’s Carruth Family Professor in the Graduate School of Education (and former Dean of the Graduate School of Education), reviews recent trends in the governance of America’s institutions of tertiary education. He finds that trustees and boards are playing a much more visible role in running universities, and that traditional university managers (presidents and chancellors) often find themselves in conflict with aggressive boards over budget decisions and overall institutional direction. Still, Lazerson believes that engaged and enlightened boards can work with school administrators to promote the educational integrity of a university, and that the inherent friction can be creative.

Oppenheimer, Ted. THE COMPUTER DELUSION (The Atlantic Monthly, vol. 280, no. 1, July 1, 1997, pp. 45-63) Although there is no compelling evidence that learning skills, especially at the earlier levels, are improved by computer use, schools throughout the U.S are cutting activities such as art, music, vocational education, and field trips in order to buy computers. Oppenheimer, a prize winning investigative reporter, says this could be to the detriment of the country and its children.

Orfield, Gary; and others. DEEPENING SEGREGATION IN AMERICAN PUBLIC SCHOOLS: A SPECIAL REPORT FROM THE HARVARD PROJECT ON SCHOOL DESEGREGATION (Equity & Excellence in Education, vol. 30, no. 2, September 1997, pp. 5-24) The authors explore demographic changes in the American primary and secondary student population, and the correlation of these changes with patterns of segregation and re-segregation in American schools. According to the article, during the 1980s the level of desegregation actually increased, but Supreme Court decisions from 1991 to 1995 have given lower courts discretion to approve re-segregation on a large scale, and it is beginning to occur. This well-documented study paints a gloomy picture of changing demographics.
and legal resistance to desegregation, which have resulted in an overall decline in the student population attending desegregated schools. Since segregated schools also tend to be the poorest, the consequences for the equity of education in America are likely to be profound in the foreseeable future.

Perley, James E. FACULTY AND GOVERNING BOARDS: BUILDING BRIDGES (Academe, vol 83, no. 5, September-October 1997)  
James E. Perley, Professor of Biology at the College of Wooster and the President of the American Association of University Professors, argues that college and university trustees and faculty must maintain and build new bridges for more effective and frequent communication. He says that faculty “have witnessed significant trustee incursions into areas of primary faculty responsibility — the curriculum, the standards for student work, and the recruitment and retention of faculty.... Faculty have been alarmed at the wholesale importation into the academic world of norms drawn from the world from which so many trustees and board members are now drawn — the world of the business community.”

Schrag, Peter. THE NEAR-MYTH OF OUR FAILING SCHOOLS (The Atlantic Monthly, vol. 280, no. 4, October 1997, pp. 72-80)  
The author explores an array of data and several studies about the quality of education in the United States today. He concludes that it is a lot better than U.S. politicians say it is, and that they and the American public need to better understand its complexities before they try to change even those areas which require change.

The author argues that it is up to the computer industry to prove that education is improved by computers, rather than placing the burden of proof on American education. Skinner argues that no such proof exists and the United States’ faith in computers to help students learn better may very well be misplaced.

New technologies could take over many instructional duties that now define university professors’ jobs, the author reports. He says that while some expect that high-tech tools will make teaching more efficient, others worry that the quality of education would erode if professors were replaced by multimedia software and recorded lectures. Experiments are underway in many of these areas, although the standard lecture model will never be eliminated entirely.

Charles V. Willie’s commentary begins a year-long series of essays in EDUCATION WEEK aimed at “locating the particular role of schools in affecting, for good or ill, the nation’s racial and ethnic harmony.” According to Willie, “With reference to education, our society [has] become obsessed with excellence and [has] neglected to also cultivate equity, its complement.” He specifically correlates the need for equity with the drive for desegregation in America’s schools, which has done much to address the needs of minority students. He strongly advocates the continued pursuit of both goals in America’s schools.
SELECTED BOOKS, ARTICLES, AND DOCUMENTS


This special section contains four feature articles by Nel Noddings, Linda Darling-Hammond and Beverly Falk, Charles M. Reigeluth, and William Berkson.


This series consists of twelve studies: Systemic Reform, Early Childhood Reform in Seven Communities, Education Reform and Students at Risk, Parent and Community Involvement in Education, The Uses of Time for Teaching and Learning, Systemic Reform in the Professionalism of Educators, Study of Curriculum Reform, Assessment of Student Performance, Assessment of School-Based Management, School Reform and Student Diversity, Technology and Education Reform, and Study of School-to-Work Initiatives. Each study consists of three volumes: discussion, summaries, and recommendations; detailed case studies; and a technical appendix. OERI published all Volume I as a set. Another report, Fitting the Pieces: Education Reform that Works, presents eight key lessons drawn from the studies to assist policymakers and practitioners to plan, implement, and sustain school reform.


SELECTED INTERNET RESOURCES

Please note that USIS assumes no responsibility for the content and availability of the sources listed below.

AACC Online
(http://www.aacc.nche.edu/)
The American Association of Community Colleges site provides information about scholarships, newsworthy events, conferences, training, government relations, and international educational organizations.

American Association of University Professors (AAUP)
(http://www.igc.apc.org/aaup/)
AAUP was founded in 1915 to “facilitate a more effective cooperation among members of the profession...and to maintain and advance the standards and ideals of the profession.” Special emphasis is given to issues related to academic freedom, although the group publishes reports and policy documents on other issues, such as accreditation, professional ethics, and administration.

American Council on Education (ACE)
(http://www.ACENET.edu/)
The nation’s umbrella higher education association, ACE’s members include colleges and universities and other education and education-related organizations. It provides a forum for discussion of major issues, maintains a domestic and international agenda, and provides leadership and advocacy to policymakers. This site is a good source for information about upcoming events and for locating education specialists on topics ranging from accreditation to women in higher education.

American Universities
(http://www.clas.ufl.edu/CLAS/american-universities.html)
A single-source link to the home pages of hundreds of American colleges and universities. Links to lists of international and community colleges are provided as well.

The Chronicle of Higher Education: Academe Today
(http://www.chronicle.com/)
A print subscription is required to access Academe Today, the online service sponsored by The Chronicle of Higher Education, a weekly newspaper that focuses on news from campuses around the world. The web site offers daily updates and a fully searchable archive. Also included in the subscription price is the annual Almanac of Higher Education, two supplements on forthcoming events, and other special series.

Education Week on the Web
(http://www.edweek.org/)
Includes the full text of Education Week and Teacher Magazine. See especially the “Issues Pages” for background about such topics as charter schools, school-to-work programs, and educational technology. Links to other pertinent sites are also provided.

Electronic Policy Network
(http://epn.org/)
Composed of a number of nationally-based think tanks, the Electronic Policy Network is a project of The American Prospect magazine, which explores national policy and politics. EPN’s virtual magazine, Idea Central, publishes selected issues devoted to education (http://epn.org/idea/education.html). Other useful sections of the EPN site include Recommended Education Links (http://epn.org/idea/edlinks.html#GE), and The American Prospect’s series on educational reform and the new media (http://epn.org/prospect/spencer.html)

Globewide Network Academy
(http://www.gnacademy.org:8001/uu-gna/index.html)
GNA, a nonprofit consortium of distance educators, offers an online gateway to net-based courses, the Distance Learning Catalog. Contributors provide full information about the courses. The listings are searchable by keyword and subject. Other features of this site include a conferencing area for teachers, a “Help Center” that links to a directory and job listings, and other information about distance learning.

Institute for Educational Leadership
(http://www.iel.org/)
This 30-year-old nonprofit organization “seeks to improve educational opportunities and results for children and youths by developing and supporting leaders who work together.” Nationwide activities engage “education and health/human services agencies, schools, school boards, advocacy groups, foundations, and all levels of government.”

MIT Media Laboratory
(http://www.media.mit.edu/)
The Laboratory comprises both a degree-granting academic program and a research program
NAEP on the Net

“The Nation’s Report Card” for over twenty years, the National Assessment of Educational Progress is mandated by Congress “to monitor continuously the knowledge, skills, and performance of the nation’s children and youth.” Currently, the assessments are required in reading and mathematics at least every two years, in science and writing at least every four years, and in history or geography and other subjects selected by the National Assessment Governing Board at least every six years. Data files, electronic publications, and printed reports are available from NAEP.

National Center for Education Statistics (NCES)

Studies from NCES treat “the entire educational spectrum, providing the facts and figures needed to help policymakers understand the condition of education in the nation today, to give researchers a foundation of data to build upon, and to help teachers and administrators decide on best practices for their schools.” Major reports include: The Condition of Education, 1997; Digest of Educational Statistics; and Projections of Education Statistics to 2007.

SRI International — Policy Division

Founded as the Stanford Research Institute in 1946, SRI is an independent, nonprofit research, technology development and consulting organization. The policy division includes a Center for Technology in Learning (http://www.sri.com/policy/teched/) and a Center for Education and Human Services (http://www.sri.com/policy/cehs/).

U.S. Charter Schools Web Site

Sponsored by California State University’s Institute for Education Reform; WestEd, a California-based non-profit education research organization; and the U.S. Dept. of Education. This site includes an overview of charter schools, a resource directory, links, state and school profiles, and steps to starting and running a charter school.

U.S. Dept. of Education

This comprehensive site provides information on the department’s programs, priorities, and services. See especially the following sections of the site: President Clinton’s Call to Action (http://www.ed.gov/updates/PresEDPlan/); Secretary Riley’s initiatives (http://www.ed.gov/init.html); legislation, regulations, and policy guidance (http://www.ed.gov/pubs/legsregs.html); news and speeches (http://www.ed.gov/news.html#speech); and publications (http://www.ed.gov/pubs/index.html).

Newsletters, journals, research syntheses, reports, guides, strategic plans, annual reports and studies are also available in full text. Since the site contains over 400 links to departmental resources, it is searchable and browsable.

White House
