

**PUBLIC EDUCATION:  
A SHIFT IN THE BREEZE**

A CONFERENCE FUNDED BY  
THE GATES FOUNDATION

SEPTEMBER 20-23, 1989  
KEYSTONE, COLORADO

## Introduction

---

On September 20, 1989, the Gates Foundation of Denver, Colorado convened a three-day conference at Keystone, Colorado entitled, "Public Education: A Shift in the Breeze." The purpose of the meeting was to bring together a critical mass of Colorado's leaders with the nation's leading experts on educational reform in order that those leaders could learn firsthand about successful reforms presently under way throughout the United States so that they might, if they wished, act to institute such reforms as they deemed to be potentially productive.

Present at the conference were 225 elected and appointed leaders of the educational establishment and representatives from the state government and the private sector. School superintendents, school board members, principals, corporate CEOs, college presidents and deans, Governor Roy Romer, the State Commissioner of Education and Commission board members, foundation executives, and senior legislators made up the bulk of the participant group. Nine distinguished national leaders in public education presented their ideas and experience with education reform.

Audiocassettes of the entire conference are available through RemCom International, 303-750-3000.

## F. Charles Froelicher: The Problem and the Challenge

---

*"To be a leader in the free world, or even a survivor, we must totally restructure our public education system." – Admiral James D. Watkins, Secretary, U.S. Department of Energy.*

By every objective measure, whether it be from the psychometric measurements of the Department of Statistics and Measurements of the U.S. Department of Education or the personnel departments of American business and industry, the results have been the same: the ability of the American high school graduate to read with understanding, write with clarity, calculate with accuracy, and think logically and academically has been on the decline for a quarter of a century. Only recently has it bottomed out.

Without exception, the leaders of America's industrial, financial and service sectors have repeatedly stated that the United States can neither win nor survive in the emerging global economy competition unless its work force, from top to bottom, is equal to or better than its international competitors.

Even though Colorado has the most highly educated per capita adult population in the United States, there is no evidence that we are an exception to the problem. By way of example, the chief executive officer of US West, the region's largest private employer, reported that 60 percent of those who take examinations for entry level employment at US West fail.

In addition, Colorado's entrance into the global economy has altered the state's educational agenda. Henceforth, to survive and remain economically competitive, the academic achievements of the graduates of Colorado's public school system must be compared to those of their counterparts in South Korea, Japan, Canada, Scandinavia, and the Common Market countries. Favorable comparisons with Chicago, Mississippi, Ohio, and the South Bronx may be interesting, but will no longer serve a useful purpose.

What happens along the road to educational reform following the Keystone Conference will depend almost solely on the individual, team and bipartisan efforts of the participants. Virtually every person in attendance has the kind of community position from which important coalitions can be built and successful reform efforts launched. Gates will continue to act as a collector, analyzer, and distributor of information. It will also be on the lookout for ways in which its grantmaking resources can be used to encourage education reform and restructuring.

*F. Charles Froelicher is the Executive Director of the Gates Foundation.*

## Charles C. Gates: Education Crisis is Opportunity for Excellence

---

*"Colorado has the opportunity to become the number one state in the nation for educational quality."*

America's education system is in serious trouble.

Over the last two decades the quality of our public education has fallen considerably behind that of other nations. Many of those students who finish schooling are ill prepared to compete in the work force, with an alarming number functionally illiterate. Too many students drop out altogether. This decline in education has damaged our economic leadership in the world market to a dangerous point. If this continues, we will have won World War II only to lose the next war, the battle for economic survival.

Our task at this conference is to find ways to address the underlying causes of our educational problems, not just the symptoms. A band-aid approach will not get the job done. We must deal head-on with public policy issues related to what is taught, why it is taught, and how it is taught. Our children and future work force, at the very least, must be able to:

- Read with understanding.
- Write and speak with clarity.
- Calculate with accuracy.
- Think logically.

While this sounds like a very broad agenda, if we are to find a solution to the education problem, we must deal with it in its entirety. We are truly competing in a global market. We can only grow and survive with an educated and effective work force – from bottom to top.

I speak as a concerned citizen and a concerned businessman who is responsible for 20,000 employees in 12 nations. In our company we found that many of our high school graduates had none of the basic skills listed above. In response, we set up our own remedial schools to teach these skills to our employees. This should not be our job. It should be the job of the public school system – but it is failing. Believe me, this job is getting done in the leading nations of Europe and the Pacific Rim.

Colorado has the opportunity to become the number one state in the nation for educational quality. The problems here are no better or no worse than the rest of the nation. And with only 3.2 million people in Colorado, we have a manageable system. Our forefathers were pioneers of the land. We should become pioneers of education reform.

The Gates Foundation hopes to be a catalyst for change by convening this conference on education reform. To succeed at this is essential to the state's economic survival. If the speakers and their conclusions open your eyes, sharpen your ideas, or inspire you to action, we will have done our job. Making long-term change will be up to you.

*Charles C. Gates is the President of the Gates Foundation and Chairman of the Gates Corporation.*

## Summary: Public Policy Recommendations

---

*The following is a summary prepared by the Gates Foundation of the public policy recommendations made by the 225 educational, business and governmental leaders at the conference along with the results of a post-conference participant survey as to what was essential or important.*

	% of responses essential or important
<p><u>Assessment of the Academic Achievement of Colorado's High School Graduates.</u> Colorado is, like it or not, in a global economy. Because of this phenomenon, the academic achievement of its high school graduates must begin to be compared with that of their counterparts abroad rather than here at home. The Colorado Department of Education must be charged with the responsibility of bringing to the attention of school districts, the legislature, and the general public, by February 1, 1990, the <i>international</i> ranking and comparative standing of Colorado's public school students in an easily understandable form.</p>	78%
<p><u>Alternative Teacher Certification.</u> In order to strengthen the academic competence of Colorado's public school teaching corps, it is essential that Colorado follow New Jersey's highly successful alternative teaching certification system. Such a system will welcome into the teaching profession the graduates of the nation's most academically rigorous colleges and universities, mid career scientists, engineers, mathematicians, college professors, retirees, and others who wish to commit themselves to teaching.</p>	83%
<p><u>Self-Governing Schools.</u> Using American business and industry as a model, Colorado needs to move at once to empower those principals and teachers who have accepted the responsibility for the education of their students, with the authority they need to achieve the goals set by the district, state, and federal government. Such schools should have, as in the case of New Zealand, broad powers in determining how they spend money, structure the curriculum, and conduct the day-to-day operations of the school. It is expected that many self-governing schools will have active parental advisory bodies or governing boards.</p>	84%
<p><u>Alternative School Governance Structures.</u> To achieve improved educational outcomes for students, a governing body other than the local school district may be appropriate. The possibilities range from the experiment in Chelsea, Massachusetts, where the governance of the district was turned over to Boston University, to Chicago, where neighborhood groups have assumed responsibility for their schools, to New Jersey, where a district was recently declared by the courts to be educationally bankrupt and was assigned to the state for management.</p>	58%
<p><u>School Choice.</u> Commence to allow parents to select which school their children will attend. This will introduce the market forces needed to motivate principals and teachers to strengthen programs within their schools. The choice system adopted must take into account both the spirit and letter of the laws relating to the nation's commitment to desegregation.</p>	57%
<p><u>Magnet Schools.</u> Create specialized and challenging schools for students within a district or metropolitan area, or statewide residential magnet schools that would provide opportunities for gifted and talented students whose potential would otherwise not be realized. Magnet public high schools, such as Baltimore's Polytechnic Institute, have been successfully addressing the academic needs of Baltimore's gifted children with a bent toward science and math for almost a century. North Carolina's residential public school for children who are gifted in math and science has been operating successfully for over a decade. Both are models which Colorado can replicate. There are dozens of others.</p>	67%

<p><u>Teacher Education.</u> Revise and strengthen the academic standards for teachers entering the teaching force by requiring rigorous academic training in particular fields of study, keeping as a requirement only those teaching methods courses with clearly identified value to the practice of teaching. The judgment as to what courses are determined to be those with "clearly identified value" must be made by arm's-length evaluators.</p>	96%
<p><u>Schools Within Schools.</u> Schools need to become more humane institutions that address the needs of individual children. To accomplish this end, teachers need to see fewer students for more hours each day and schools must have varied curriculums to allow children to achieve their maximum potential. Existing schools need to be restructured (e.g., divide a large school into units of no more than 400 students; allow elementary schools to use different educational approaches; assign students to small "teams") so that the existing atmosphere of anonymity is replaced by a sense of community, and each student is known well by his teachers and peers.</p>	78%
<p><u>Teacher Tenure.</u> Modify tenure regulations in such a way that teachers will be motivated to perform at a high level throughout their careers, so that less competent and mediocre teachers will not be protected against removal from the system.</p>	77%
<p><u>Teaching Assignments.</u> Administrators bearing the responsibility for student achievement outcomes must have the flexibility they require in assigning teachers to various schools and courses, to achieve agreed-upon national and state standards and goals.</p>	83%
<p><u>Early Childhood Education.</u> Emphasize the value of early education, particularly language development, and create opportunities for all children to participate in an educationally enriched preschool environment.</p>	98%
<p><u>Incentives for Performance.</u> Those who teach and administer in public schools must commence to accept the principle of a market-sensitive compensation system. Outstanding achievement must be rewarded and encouraged, and variations in pay scales must be permitted in order that public schools can attract strong teachers in areas where the schools are weak.</p>	91%
<p><u>Awards.</u> The public and private sectors should jointly or separately consider establishing a major financial award system which, for the next 10 years, would recognize annually those in the Colorado public school system who have contributed significantly to the successful achievement of the goals of educational reform. One million dollars annually in such prizes would permit the recognition of 40 educators at \$25,000 per award each year. Such awards could, as in the cases of the Nobel and MacArthur prizes, have a profound effect on the profession in terms of its prestige, stature, and motivation.</p>	76%
<p><u>Teacher Competency.</u> To determine the academic competency levels of both the existing teacher corps and those in training, it will be essential for the state to establish a system of rigorous academic competency evaluations with the overall results of that evaluation being made public. Such information will provide policymakers, educators, and individuals with the information they require in order to take whatever remedial action is required.</p>	75%
<p><u>Retraining of the Current Teaching Pool.</u> Teachers educated prior to the enactment of more rigorous teacher education standards will continue to be needed in the school systems, but will benefit from additional courses or training that address the emphasis on rigorous academic achievement. There is virtual universal agreement that one cannot teach a subject that one does not know. Where such a situation exists, the situation must be altered.</p>	87%
<p><u>Business Sector Activity.</u> The participants at Keystone were universal in their encouragement of the business and professional communities to organize themselves to actively engage in pressing for those public policy reforms described by the speakers and suggested by the participants. There was widespread agreement that this organized effort by business was going to need</p>	91%

---

professional staff support and leadership which could be paid for by the foundations and businesses.

Coalition of Essential Schools. The Coalition of Essential Schools is made up of 50 secondary schools operating in 18 states, including New Mexico and Arkansas, whose governors are the co-chairmen of the Governing Committee responsible for responding to the challenges posed by the President in Charlottesville in September, 1989. 75%

Operating on the classroom principle that the student is an active worker rather than a passive listener, and that teachers must be coaches of teams of workers rather than lecturers, the Coalition came into being in 1983 under Dr. TheodoreSizer of Brown University. Sizer's position is that in the end, the success of the restructuring efforts in public education must be measured by determining the extent to which each graduating student has demonstrated a mastery of thinking well, communicating clearly verbally or in writing, computing with ease and accuracy, and such other disciplines as the nation shall determine. This mastery can only evolve in the classroom.

There is an opportunity for Colorado to become the 19th state to take part in the effort. The opportunity should not be missed.

Establish National Standards for High School Graduates. The teachers of this nation deserve an answer to their question, "What is it that the United States needs and wants? Give us specifics. Provide us with a clear set of goals and empower our principals and us to reach those goals and we will do it." 66%

Linking High School Accreditation to Outcome by 1993. Accreditation of public high schools traditionally has been dependent on appropriate physical facilities, acceptable teacher - pupil ratios, the presence of teachers and administrators who have been certified by the state, etc. By 1993, Colorado should become the first state to link outcome to accreditation, i.e., to what extent have each school's diplomas been awarded upon the successful mastery of the central skills and knowledge prescribed by the district, state, and/or the U.S. Department of Education? 83%

## Dr. Ernest L. Boyer: School Reform – The Unfinished Agenda

---

*"I believe the reform movement is running out of steam. If we are to achieve excellence, there are five priorities for action."*

Since the National Commission declared the nation at risk because of its mediocre education system, the nation has been engaged in the most sustained and most bipartisan drive for school renewal in its history. In particular, I applaud the work of the principals, the teachers, the superintendents – the true reform heroes who often go nameless. And yet, even with their substantial achievements, I believe the reform movement is running out of steam – not from lack of effort but from lack of overall direction. The time has come to find a more sharply focused agenda for school reform in the 1990s. I'm convinced that Colorado can lead the way. At the launching of this marvelous frontier movement, let me comment on five priorities that are absolutely crucial if we are to achieve excellence in education by the year 2000 and beyond.

**#1. An urgent call to action.** This country is still not responding to our education emergency with the required sense of urgency. Dreams can be fulfilled only when they've been defined. Like the Marshall Plan that rebuilt Europe after WWII, we need a plan to rebuild our nation's schools. Each state should have its own ten-year agenda and perhaps then, each school district as well. Let's march together.

**#2. Focus intensely on early education and give top priority to language.** It's here that the battle for excellence will be won or lost. We must help all children become proficient in the written and spoken word; we must help them to compute accurately since mathematics is a universal language. Let's have a solid pre-school program so that all children can be linguistically empowered. If by grade four our children cannot write with clarity, cannot read with comprehension, cannot accurately use the number system, I think we should close the doors and start again.

**#3. The school calendar must begin to reflect the changing work and family patterns of the nation.** When today's school calendar was set, 95 percent of all school-age children were living on a farm with their parents, staying home in the summer to tend the crops. Today that world has been turned upside down. In most households, both parents work away from home. I propose a year-round school calendar for the new reality of the 21st century. I'd like to see Colorado experiment with afternoon and summer enrichment programs, and new calendar arrangements that would better reflect current family and work patterns and help bring the parents and the school systems back together again.

**#4. Make every school more manageable and more humane.** School is a big place where nobody really knows you. I'd break up every junior high and high school into units of no more than 400 students to overcome the anonymity of the system. I'd have schools within schools. I'd create satellite campuses in shopping malls and on the work site. I suggest that by the year 2000 we assign all students in junior high school to a small support group of no more than 20 students each so that they join a little community – a rebirth of the old-fashioned homeroom idea. I'd like to see all students feel needed and have a sense of worth by becoming responsibly engaged in youth clubs and retirement villages and in tutoring others at school.

**#5. Change school governance.** Give more flexibility to the local school and empower principals and teachers, holding them responsible for their outcome, not procedures. We hear a lot of talk about parent choice, but the time has come to give more choice to principals and to teachers who can creatively build their own systems, instead of being systematically suppressed. Let's get the best and the brightest. Let's recruit outstanding students into teaching as early as junior high, give full tuition scholarships, and have alternative certification. And finally, we need to honor our teachers in symbolic and meaningful ways, make them the unsung heroes of our culture.

America is at a historic crossroad. I'm convinced the most urgent task confronting our generation and the State of Colorado is the rebuilding of the nation's schools.

*Dr. Ernest L. Boyer is President of the Carnegie Foundation for the Advancement of Teaching and Senior Fellow of the Woodrow Wilson School in Princeton.*

## Fletcher Byrom: Business and the Schools

---

*"Business leaders have a critical stake in the progress of educational reform."*

In the late 70s, Peter Drucker, the renowned authority on industrial management, warned that in the 90s this country would face serious labor shortages at the same time we would have extremely high unemployment among our youth.

Today, that problem is here. American business is expected to face a shortage of 23 million workers. And a large percentage of those entering the work force are ill prepared to handle the more complex and varied tasks in a global, technology-based economy.

- Only 70 percent graduate from high school.
- Over 60 percent of all 17-year-olds cannot understand basic information, nearly half have limited understanding of mathematics and most lack the comprehension skills needed for business, government or higher education.
- At the same time, a larger proportion than ever before of 18- to 24-year-olds is coming from disadvantaged backgrounds with minimal work skills.

We're creating a permanent underclass of major proportions in this nation, and Colorado is no exception. Our youth are basically unable to perform as constructive citizens in today's society. In the past, public schools paved the way for a child's full participation in the economy. For half of our nation's children, this is no longer the case.

### **Business Must Compensate for the Decline of Parent Advocacy**

Parents, once the key political constituency for education, are no longer a major voice. Only 27 percent of the nation's households have school-age children. Unless another sector steps into the void, schools are not likely to have the public support necessary for change. I believe that business is the only constituency with the direct stake and sufficient clout to compensate for the decline in parent advocacy.

Business leaders have a critical stake in the progress of educational reform. Preventing failure before it becomes entrenched is the most cost-effective and humane way to improve the prospects of children. But what can business leaders do? Educate themselves with the problem and then become an advocate for change by getting the legislatures and the public to understand the needs and find the money for reform. Business itself, however, should not replace or supplement existing funding mechanisms for education.

### **A Broader Call to Action**

What is needed to ensure a reinvigorated education system that delivers excellence and educates all the nation's children to their fullest potential?

- Education reform must be broadly construed to make it possible to mobilize community resources and design health, welfare and housing policies that reinforce and support the educational process.
- Find new expenditures for social programs such as post-natal care for pregnant teens, create smaller schools and encourage reentry into the school system.
- Work with legislatures to effect the change and find the funding necessary for reform.

As the education underclass grows, we need to look beyond the schoolhouse doors. We need leadership from all levels. Business can make a difference, but without the legislature it cannot be done. I am delighted that numerous senior officials from Colorado's legislature attended the conference. If this nation is going to correct its educational problems, it will be because business, the legislature, and the community understand the need for change and form a coalition.

*Fletcher Byrom is the retired Chairman and Chief Executive Officer of Koppers Company, Inc.*

## Dr. Saul Cooperman: Teacher Certification – The NJ Approach

---

*“If you appeal to the intellect of the teacher, the teacher will apply it to the classroom.”*

To meet the educational challenge ahead we have to ask the right questions. Two of the most important questions are deceptively simple: Who teaches? Who administers?

I started as New Jersey's Commissioner of Education in July of 1982. After defining the issues, I submitted 20 separate initiatives to Gov. Thomas H. Kean which became his blueprint for educational reform. Four of them had to do with teachers. We refer to them as the four R's: Recruit, Recognize, Renew and Retain.

- **Recruit.** We boosted beginning pay for teachers in one year from \$14,200 to \$18,500. To draw quality students into teaching, we now offer scholarships of \$7,500 a year for four years provided they come back to New Jersey to teach for four years in an urban school district or six years in a suburban district.
- **Recognize.** You have to recognize people who are doing a good job, and we have a program to do that. We have a symposium every year to discuss issues, and I and my staff constantly meet with teachers.
- **Renew.** If you appeal to the intellect of the teacher, the teacher will apply it in the classroom. We started an Academy for the Advancement of Teaching and Learning. We now have 85 school districts in New Jersey that assign one teacher – the Staff Development Leader – who will be freed from all teaching responsibilities for one half-day to focus on staff development and the needs of the students.
- **Retain.** To retain teachers they've got to feel they are a part of the action. Cooperative Relationships is a mediation program that helps teachers work with administrators. Effective Schools allows the teacher to identify a problem, propose a solution, and outline expected results. For the best proposals, we give out up to 30 grants per year of \$15,000 each.

### **Alternate Route to Teacher Certification**

In 1982, with teacher shortages, New Jersey was giving emergency certification to teachers in math, science and foreign language. At times, 20 to 30 percent of our teachers had received this type of certification. This practice, which had been around since the 1920s, was a euphemism educators use for lowering standards. I also found that the majority of education majors were from the bottom half of their high school class.

We implemented a two-year program to ensure that teachers reached a minimum standard before certification. We declared there would be no more emergency certification of teachers (except for vocational and bilingual education). So we had to find another way to raise the quantity and quality of teachers at the same time. We developed the alternate route for certification. Like the traditionally certified teacher, a teacher under the alternate program needs a college degree, an academic major, and can pass a test of academic competence (we use the NTE). But instead of having to go to school to learn teaching methods, an alternate route teacher could learn the pedagogy on the job through a one-year program.

All hell broke loose. We overcame the initial opposition, particularly from the teachers' colleges, by getting 100 percent newspaper editorial support and by meeting with small citizen groups across the state.

Four years later, we have not had one emergency certification except in vocational and bilingual education. Test scores on NTE are now in the top quarter of the U.S. In almost every area, the alternate route teachers score far higher than the traditional route teachers in the academic area. The dropout rate after the first year of teaching in the traditional route is 16 percent; the alternate route dropout rate is only four percent. And we are attracting more minority teachers; 25 percent of those entering the program are minorities.

What have we learned? It works. We have increased the quantity and the quality of our teachers. We have also learned that it's a heck of a lot of work. In conclusion, I thought James Baldwin was right when he said, "Not everything that is faced can be changed, but nothing can be changed unless it is faced."

*Dr. Saul Cooperman is the Commissioner of Education for the State of New Jersey.*

## Dr. John Goodlad: Educating Our Educators

---

*"Schools of education must have a moral imperative to cultivate the educational health of their communities."*

My colleagues and I are engaged in two activities. First, we're painting a portrait of the current conditions pertaining to the education of educators in the nation's schools. The second part of our work is designing an implementation strategy to better educate our educators. Here are some of our ideas.

### **Underachieving Curriculums**

Besides having underachieving people in our schools, we have underachieving curriculums. Curriculums in secondary schools are woefully out-of-date, and there have been no serious curriculum redesigns since the 1960s.

Schools and universities must jointly revise curriculums. But we face two serious obstacles. First, we cannot renew curriculums with public school teachers who, in many areas of the country, are employed only 180 days a year. They do not have the time to participate in the process. And, second, universities have no incentives to engage seriously in rebuilding curriculums in the lower schools.

### **The Need for a "Pre-Education Program"**

We must define and develop a "pre-education" program for our teachers. Every recommendation for teacher improvement since 1892 has proposed that teacher education include:

1. A strong general education program.
2. A major in an academic subject.
3. As few courses as possible in education.
4. As long a period as possible interning with a practicing teacher.

But, is this enough? What exposure is the education student getting that will help him or her decide when to consult values and when to consult data to solve a problem? Teachers face such decisions every day and aren't well prepared to deal with them.

The recommendation that teachers get as much field experience as possible needs further scrutiny. Teacher mentors have no special preparation for their task. And many school systems are saturated with student teachers as universities frantically try to place students. Often these placements are far away from the campus and supervision. University supervisors rarely bring student teachers in to talk about their mission or what they expect of them. Should we go on placing students in long internships under these conditions?

### **Partner Schools - A Good Alternative**

Many people are proposing an alternative that we support - partner schools. These are schools operated jointly by school districts and universities for teacher education. Successful partner schools are possible if university and school representatives have an equal say in making decisions.

We have some good models of universities and school districts working together for the development of exemplary schools - we need to get such models going in every state. This will call for reallocation of state funds on a competitive merit basis - if a teacher education program wants to obtain additional resources to redesign itself, it must come up with a plan and commitment.

Simply allocating more resources to doing what we're doing now is a waste of money. But we will need additional money to enable innovative programs to survive while we're phasing out the old education system and recreating the new.

*Dr. John Goodlad, the author of 22 books, is the Director of the University of Washington's Center for Educational Renewal.*

## Dr. Frank Newman: Advice on School-Based Management

---

*"It's not decentralization or centralization, it's both."*

The central initiative as to how to manage the education of children should come from within the school, as opposed to outside the school. Often called "school based management," I think this concept is better described as "self-governing schools." On the road to self-governing schools, let me offer three points that affect how we can go about it and what concrete steps we can take here in Colorado.

The first is we are talking about education in the age of empowerment, when there's a fundamental change in the way the world works. In business, hierarchy has given way to empowerment of the individual. That means there must be a fundamental change in the nature of education. We are no longer saying "don't think"; we are now saying "you must think."

The second is that this is education in the age of continuing change. We must find a way to create a system that is self-renewing and is constantly looking for ways to improve.

The third is that this is education in the age of the system, not just of the school. Over the years we have built up through legislation, regulation and tradition a system that constrains schools in intelligent ways and sometimes in ways that are bureaucratic. School-based management shouldn't turn over all the decision-making powers to the school. We need a balance. We need decentralization of the opportunity to use your mind, to find new ways to do things to take initiative; and centralization of the standards, expectations and modes of accountability. It's not decentralization or centralization, it's both. We must create a system whose main task is to create positive change and set expectations, a system with the fundamental goal to help improve how students learn. If it doesn't help students learn, it isn't adequate.

### What Can We Do Generally and in Colorado?

Generally, I think we need to set expectations and encourage, not punish, creativity; get as much information as possible (because to know the problem is to help solve it); develop rational competitive forces within schools; create incentive programs; make structural changes, such as school size; recognize and compensate those educators who succeed and finally, simplify through deregulation. For Colorado, let me give a few specific suggestions.

- We need to agree to and set clear-cut expectations because what you expect is what you get.
- Continue the Creative Schools Initiative, using competitive grants as a vehicle for drawing on the creative energy of a school and its community.
- Build a better business community coalition to work with the schools. Everything at the statewide level needs to be matched at the local level. The unions and the teachers have to be involved, too.
- We have to find a way to reform teacher education. We talk about training kids to be empowered individuals. But you cannot have that kind of an education unless the teacher is an empowered individual. Here's a suggestion. Set up a pool of money based on a formula and use outside evaluators to award competitive grants to universities that have the best programs for educating teachers. We need better ways of training teachers if we want teachers and principals to change in the radical ways that we've been discussing.
- We need to think about deregulation, but Colorado has already made a good start on that by authorizing the ability to get waivers of the regulations. But, we need to be bolder about it.
- And finally, we need to go further with the Commissioner's plan to think about new ways that the Department of Education can be used as a support agency.

Can all this be done? Is it possible to change schools in America? If you think longer than 10 years, the answer is yes. If you are willing to work at it, the answer is yes.

*Dr. Frank Newman is President of the Education Commission of the States.*

## Dr. Ruth Randall: "Choice" – The Minnesota Experience

---

*"In Minnesota we believe that incentives and opportunities will bring about faster and more enduring change than mandates."*

That's why in 1987 we developed "Choice," a program that empowers parents and students to make their own education opportunities. In turn, Choice has driven other changes in our education system and provided incentives for improvements.

Essentially, under the Choice program, a student can select where he or she goes to school based upon a school's program. As such, Choice has been called an elitist program with only a handful of kids transferring schools. But every student can move at his or her discretion. In fact, we've found that many parents choose to keep their children in the same district.

Critical to implementing Choice has been consumer information. We needed to make sure parents at every socioeconomic level were informed about Choice. Traditionally, somebody other than parents has decided what happens to kids ages five to 18. So parents need counseling and information to make informed decisions.

We have three Choice programs in Minnesota: Open Enrollment, High School Graduation Incentives, and Post-Secondary Enrollment Options.

Open Enrollment enables a student to enroll in any participating district school. Although there was initial concern that the program would cause smaller districts to fold, more students transferred to smaller districts for reasons such as smaller class size. In 1987, our first year, 89 percent of parents asked reported high satisfaction with their choice; 137 of our 721,000 students participated in Open Enrollment. In 1989-90, 3,600 said they were going to move. We are gathering data to find out how many really did move.

Our second Choice program is an extensive High School Graduation Incentives program for students 12 and over that allows them to attend a different public school, an approved public alternative education program, an area learning center, a private alternative, or a post-secondary enrollment option. The program, created by statute in 1987, drew 1,400 participants its first year; 1,800 last year.

Our third Choice program is Post-Secondary Enrollment Options, which enables kids to try out a post-secondary experience, increases interaction between educational institutions and systems, and reduces families' financial burdens. Last year about 5,600 juniors and seniors participated full- or part-time.

The Choice Program still has some flaws. For example, we provide transportation to kids who qualify for reduced price lunches. But that still leaves a group of kids who may fall through the cracks. And access is a problem. Minnesota schools, for example, may offer seven foreign languages. In greater Minneapolis, you probably can take only two. And in Post-Secondary Enrollment Options we cannot assure equitable access. Although we like to say we have a post-secondary institution located within 35 miles of everyone who lives in the state, we don't have the University of Minnesota or a state university that is close to everyone's home.

### **Overcoming Resistance to Choice**

I was asked to talk a little about how we overcame resistance to Choice. Choice was one of eight ideas the governor presented to the Citizens League in 1985, part of a package called "Access to Excellence." We put together a marketing plan and campaign to carry out his vision.

I established a 35-member task force of representatives from every educational group to help with logistics. Some people on the task force were really negative about the idea, and some strongly supported it. We began drafting what we wanted to include in the legislation. From the conflict we were able to form coalitions to work out compromises. We gave speeches, we went on the road and hosted special events, and we held public debates on TV. The final legislation that passed May 20, 1987 had bipartisan support (a Republican carried it in the House; a Democrat in the Senate).

We believe Choice is a very positive basic program that shows great potential.

*Dr. Ruth Randall is the Commissioner of Education for the State of Minnesota.*

## Governor Roy Romer: A Progress Report and the Challenge

---

*"What is the barrier? Not money. It's collective will."*

If the business of a governor is to prepare us for the future, then my most important business is education. Education is the opportunity for us to take what we have been given – the gift of life – and develop our human potential to its fullest.

Let me share some of my beliefs, convictions and conclusions in terms of how we approach the educational challenge in this state.

- First and foremost, we can control our destiny, we can shape our future. We must make a community-wide commitment to making education a priority of the highest order. At the same time, there is a critical need for state and national leadership, especially in terms of setting priorities and establishing a common vision.
- People want to be participants and not spectators because learning enhances self-esteem. Consequently, models for a new educational structure must come from the bottom up and not the other way around.
- Education is basic to skill levels and to the development of our economy. Every child can be successful and deserves an educational experience that stretches his or her abilities.
- Education is basic to the system of democracy and self governance. Investment in education is essential, but improving education is not just a question of resources, it is a question of will – collective will.
- We need to increase our expectations for education, especially given the amount of resources that we are devoting to the K-12 system. We need to encourage the design of a system that promotes learning rather than the acquisition of information.
- We need to empower teachers and principals to have more control and flexibility and, in exchange, more responsibility for the product.
- Education must be a lifelong process. Schools can play an important role in the pre-K education and also in lifelong learning opportunities.

### **Colorado: A Good Start**

We are doing some things right in Colorado. We have recently enacted a new school finance act. But funding schools is not enough. We need to find a way to engage the local community with the local school. By statute, we already have an accountability committee in every school in this state. Wouldn't it be exciting if each community got involved with those committees in making their school the best school it can be?

We have the Creative Schools Initiative which offered \$5,000 of private money to 25 schools with creative ideas on how to make the schools better. We were astounded at the response of 350 proposals. Business education partnerships are an important part of the action agenda. In the last 30 days we have had a very creative start. We began to explore the many ways that a business can make a difference in education.

We have a good start in Colorado with our preschool program and we can do better. The first 60 months in the life of a child are the most formative. We have got to be there on the front end and not just be doing the remedial work.

Our goal could be to become number one in education in the world. I think that could be done here. What is the barrier? Not money. It's collective will. The challenge for me as governor is to work with you to arrive at a collective will in this society to act out what we most fundamentally believe. And we will produce the very best educational system in the world. It can be done. There are no simple solutions, there are no single answers. Our commitment has to be long-term.

*Roy Romer is the Governor of Colorado.*

## Albert Shanker: Public Education – How to Fix It

---

*"We need a system in which people do the right thing because it is in their own interest to do the right thing."*

I am not a person who believes in drastic solutions. Sometimes minor changes will do, other times you need major ones. The question is, what will work? And that depends upon the problem. As I see it, not only is the bottom of our schools in trouble, so is the middle and so is the top. Almost all of our schools and all of our students are failing.

What's the evidence for that? According to a study by the National Assessment of Educational Progress, and put in very rough and nasty terms, the overwhelming majority of kids who go to college in the U.S. would not be accepted in colleges around the world.

Why is this happening? For one thing, we get our teachers from our colleges and our college standards are below those in Europe. And making matters worse, there will be fewer people in the teacher pool in the future, even if we do make teaching a more attractive job. But the main thing wrong with our schools is the way we treat students. Learning has become a passive process, where success is measured by how well you can sit still and listen to a teacher talk. If they do not learn at the same rate the teacher is talking, they lose out. We need to get away from the talking model of teaching. We need to think of the teacher as a manager and the student as a worker.

Creating good models for education reform is not enough because the process of changing our schools will be very painful. And the only way you can get people to make the painful decisions that need to be made is to create a world in public education which is similar to the business world. Without incentives, without a system in which there are winners and losers, people aren't going to make the right decisions. We need a system in which people do the right thing because it is in their own interest to do the right thing.

### **A Proposed Colorado Merit School Plan**

I will briefly outline a Colorado plan that is one such model. Suppose the legislature were to set aside money equal to \$500 for each teacher in the state into a Colorado Merit School Fund. At the end of say five years – because it takes that long to make effective change – we will give big prize money (\$30,000) to individuals in the 10 percent of the schools that make the greatest percentage progress in levels of writing ability, levels of reading ability and mathematics ability. Every school will have a chance of winning because they will compete with comparable schools.

In order to participate, some ground rules will have to change. First, both the school board and the union must become more flexible and both sides must deregulate in order to allow each school to compete. Second, because each school will be trying different teaching methods, we can no longer compel parents to send their kids to a given school. In other words, give parents a choice. Third, since the teachers and the principal will be motivated to win the prize, you no longer need 50 percent of the school money for the central bureaucracy to oversee these people; you turn over that budget to the faculty of the school (one of the major differences between American schools and all the others in the world is that we spend half of our money on bureaucracy, whereas other schools of the world spend 20 percent or less).

Once you have schools competing to win prizes, they will ask themselves how to do a better job helping kids to learn. A longer school day, longer school year, paying some teachers more than others, loosening tenure regulations, more technology, more early childhood education, and more summer programs become real possibilities. The professionals must be given the responsibility, but they need to be held accountable through a system of rewards and punishments. Teachers and principals can then make decisions together as a team.

Colorado has to set its objectives, make sure the incentives are right, make sure people aren't cheating (because that also happens in any competitive system) and then let the machine work. All the other things that we are talking about will fall into place.

*Albert Shanker is the President of the 665,000-member American Federation of Teachers.*

## Dr. Theodore R.Sizer: The Essentials of the American School

---

*"Good schools are places where students are working to get the answers to questions."*

We in this room accept the need for change. If we didn't accept it, we wouldn't be here. We accept the need for redesign to help kids. So let's start by talking about what kids need. Let me make four commonsense observations. First, kids need learning goals, or targets. Second, kids differ. They learn in different ways. Third, kids learn just the way we do - by engaging. Finally, kids learn by example, by modeling.

### **Kids Need Goals**

Let's look closely at these principles. First, kids need learning goals, some measure of their outcomes. A youngster needs an idea at the beginning of what is expected at the end, if she is going to know what and how to study. That's the kind of target kids need. We need to give them a way to measure their mastery of the skills we value - and then a way to exhibit their success with public accountability.

### **Kids Have Different Needs**

You and I don't learn at the same rates or have the same motivation. Teachers teach us well by knowing us and how we learn. The typical ratio of students to teachers in many big cities is 175 to one. The Coalition schools are saying no more than 80, and many are saying 50 is the number of kids a teacher can get to know well enough to inspire. The Coalition schools also say they can do this without changing the per pupil expenditure by more than 10 percent. Can it be done? Yes, it's being done in schools right now. Is it easy? No. It's very difficult. It means making children the number one priority.

### **Kids Learn by Engaging**

What attracts you and me? Something that makes a connection with our lives. If someone orders me to study the pyramids, I might pretend to study. But if I can make a connection with something in ancient Egypt, then I will want to study. You can see it in the classrooms when something galvanizes a child. But it's not possible to engage kids' minds on a standardized basis. The teacher has to figure out how to capture the attention of all the kids. And what captures our attention most? A demanding and authentic question. Good schools are places of questions, not of answers to other people's questions. Good schools are places where students are working to get the answers to questions. The most important word in a school is, Why. Because learning is a matter of puzzlement, of trial and error. Teaching then is a matter of coaching, not lecturing. When a teacher is talking a student has no time to puzzle.

### **Kids Need Good Models**

Good schools, like good families and communities, are self-conscious places. Teachers and principals should live the behavior they want kids to have.

The implications of these four commonsense notions fly in the face of almost 100 years of tradition. Most schools have no tradition of thinking non-defensively about routines. When people in schools do think about them, the scale of what must be done looms very large, because everything important that happens in a school affects everything else. You cannot engage in piecemeal school reform. Finally, we're talking about creating a new culture, about changing the way we teachers think and act, the way we see ourselves.

To conclude, I have one specific suggestion for those of you in policymaking positions: recognize how complicated this is, and that you need to jump start this reform. That doesn't mean \$5,000 competitive grants. It means \$125,000 grants, not competitive at the beginning. My hunch is that most of us are still underestimating the amount of money needed to give faculties, kids, and parents the time to work through these commonsense notions to something that makes sense.

Good schools are places of questions, not of answers to other people's questions.

*Dr. Theodore Sizer is Chairman of the Education Department at Brown University and Chairman of the Coalition of Essential Schools.*

## Dr. William Youngblood: Magnet Schools – The NC Experience

---

*“The school’s mission is to prepare students for roles of leadership in science and technology. We must also encourage our students to dream and prepare them to make their dreams a reality.”*

The North Carolina School of Science and Mathematics (NCSSM) holds the distinction of being the country’s first publicly operated residential magnet school, enrolling academically motivated and talented students from all over North Carolina. The school emphasizes a curriculum that prepares students for careers based in the sciences and mathematics.

Early in 1977, Governor James B. Hunt established NCSSM because he was convinced that the formation of a science and mathematics school was critical to the economic future of North Carolina. There was extensive opposition to the school’s formation because of concern over costs, elitism, and skimming of talent from other schools. There was also criticism because it was operated outside the Department of Public Instruction. For two years, NCSSM was operated under the Governor’s Office, then the responsibility was transferred to the University of North Carolina. This autonomy was needed in order to experiment in curriculum and pedagogy. A 25-member Board of Trustees sets academic program guidelines such as graduation requirements. Teachers serve on term contracts; tenure is not given.

In addition to the minimum graduation requirements for the two-year program, students may take advanced electives, and have opportunities for individualized study and independent study. Work service at the school and 60 hours of service in their home community are also required. Mentorships, student research and Special Projects Week are special components of the NCSSM program. To fulfill our outreach mission, Summer Ventures operates five-week science and math summer camps on six university campuses at no cost to 725 high school students each year.

Keys to the success of our academic program are:

- The diversity, credentials, and commitment of our teaching staff (all teachers hold Masters degrees or above, and 43 percent hold a Ph.D. in their field).
- The resources provided by the general assembly, the private sector, and the parents (capital improvements, including the property, are now valued at about \$30 million).
- The motivation and capability of the students.

### **The Results Are In**

Our graduates number highly among National Merit finalists. They average 1250 on SAT scores. Seventy percent have pursued degrees in North Carolina. In their fifth year after graduation, the class of 1982 reported that:

- 90 percent completed or were completing undergraduate degrees, 82 percent majored in math or science.
- 34 percent were in graduate or professional schools with 80 percent studying science and mathematics.
- 4 percent of the class had received commissions from the United States’ military academies.

Similar results were obtained from the classes of 1983 and 1984 when surveyed five years after graduation.

The School’s mission is to prepare students for roles of leadership in science and technology. We must also encourage our students to dream and prepare them to make their dreams a reality. To accomplish this we must teach them not only content and skills, but character, commitment and confidence. The investment we make in them (\$11,000 per student) is not just an academic investment. They will become the stewards of our society.

*Dr. William Youngblood is the Principal of the North Carolina School of Science and Mathematics.*

## Mission Statement

---

The Gates Foundation was incorporated in the State of Colorado on November 6, 1946 by the late Mr. Charles C. Gates and members of the Gates family. Since its inception, the Foundation has paid out grants totaling \$44,862,580.

The purpose of the Gates Foundation is to aid, assist, encourage, help initiate or carry on activities which will promote the health, welfare and broad education of mankind whether by means of research, grants, publications, its own agencies and activities, through cooperation with agencies and institutions already in existence, or by any other means which from time to time shall seem appropriate to the Foundation.

The Foundation was created in 1946 because the Gates family believed that voluntary contributions of time, money and labor were essential to the development of this country's social, educational, cultural and scientific institutions. The Foundation trustees still support that basic commitment and continue to make every effort to remain alert to society's changes and challenges.

Except in those instances where it has assumed the initiative, the Gates Foundation has generally confined its grantmaking to the State of Colorado.

# The Gates Foundation

---

## Board of Trustees

Charles C. Gates  
Post Office Box 5887  
Denver, Colorado 80217

George B. Beardsley  
2 Inverness Drive East  
Englewood, Colorado 80112

Brown W. Cannon, Jr.  
36 Steele Street  
Denver, Colorado 80206

William W. Grant III  
Post Office Box 5168 T.A.  
Denver, Colorado 80217

Robert K. Timothy  
2155 East Alameda Avenue  
Denver, Colorado 80209

Diane Gates Wallach  
305 Franklin Street  
Denver, Colorado 80218-4006

Mike Wilfley  
Post Office Box 2330  
Denver, Colorado 80201

## Foundation Officers

Charles C. Gates, President  
Brown W. Cannon, Jr., Vice President  
T. J. Gibson, Treasurer  
F. Charles Froelicher, Secretary

## Staff

F. Charles Froelicher, Executive Director  
Susan E. Heider, Secretary  
Karen White Mather, Staff Assistant  
Christina H. Turissini, Comptroller  
Suzanne Stenmark White, Program Officer

## Office Location

3200 Cherry Creek South Drive, Suite 630  
Denver, Colorado 80209-3247  
Telephone: (303)722-1881  
Facsimile: (303)698-9031