

## Engler-BRT

### Introduction

Today, I am going to put aside my hat as a university president and take a somewhat broader perspective. As a member, both of the National Science Board and the National Academy of Engineering, I have been heavily involved in recent years in a number of efforts to assess the challenges facing this nation as we approach the 21st century. The dominant theme of these activities, of meeting after meeting, of study after study, is the growing crisis our nation faces in the development of its human resources and in the education of a work force that will be competitive in the global economy of the century ahead.

Let me be frank with you. I am very worried--worried about the future of our nation, worried about the future of our state, worried about the future that my children will inherit, and worried about both your future and mine--since it is clear that everyone of us is at great risk because of our serious underinvestment in the quality of our human resources.

Today I would like to share with you my concerns. In a sense I will only be reading some of the writing on the wall. But, beyond that, I am going to be so bold as to make several suggestions about what might be done about the state of public education in America. In particular, I wish to issue a "call to arms" to you as parents and as citizens to take action before it is too late.

Today an unprecedented explosion of knowledge heralds the onset of a new era. Since people are the source of new

knowledge, our nation is relying increasingly on a well-educated and trained workforce to maintain our competitive position in the world and our standard of living at home, as well as to harness the power of this new knowledge for the good of our planet and for all of mankind. Yet, here we are in real difficulty because we are simply not educating enough new people to keep our economy competitive. Further, there are serious signs that the education of the present American workforce is seriously inadequate to meet the demands of the next century. This has become known as "the pipeline problem" since it involves the full spectrum of education, from preschool through K-12, through higher education, to lifelong education.

### **Possible Solutions**

#### Some General Observations

The reform movement launched by the "A Nation at Risk" report with only modest improvement in the quality of our public schools. Teacher salaries have increased; academic standards have been raised; leaders in both the public and the private sector have become strong advocates for education. Yet we still have not made much progress.

Part of the problem is that we essentially have taken the system we have in place for granted, assuming that it is correct and that all we need do is fix it up a bit. We are only now beginning to recognize that we need more than gradual reform. We need a complete overhaul of our public schools.

But doing this will be a great challenge. Major reform will be strongly

resisted from many quarters: by teachers and unions, by administrations and school boards, by politicians, and even by parents. All will feel threatened by the significant changes necessary to restore the quality of American public education. And well they should, since we do not even have agreement on the most general nature of the changes which must occur.

### **What We Know**

The truth is that we already know a great deal about what needs to be done to improve public education. We know our children need respect and freedom if they are to learn. We know that we need to see each child as an individual in the context of their needs in and outside the classroom. We know that children cannot learn if they are hungry, or sick, or homeless, or abused.

For too long we have compartmentalized our approach to children and families, treating first one symptom and then another. We have to recognize the needs of the whole child-- indeed the impact of the entire social fabric--on the nature of education.

Thanks to the experience of the great private schools such as Cranbrook, we know many of the distinguishing characteristics of successful schools:

- i) freedom from external control and regulation that leaves more power in the hands of the individual school to define its own educational program;
- ii) strong leadership in trying to unite the faculty and students by articulating the clear academic mission for the institution;
- iii) extensive teacher preparation in trying to decide how to teach, what materials

- to use, and what curriculum to follow;
- iv) respect for the individuality of the student; and, most significantly of all,
- v) extensive parental involvement in the life and the progress of the school.

## **The Plan**

### Background:

Michigan K-12 system is massive and complex

...562 districts

...\$6.7 billion per year (local, state, federal sources)

...1.5 million students

...82,000 teachers

...7,500 administrators and 65,000 other staff

...State Board, Department of Education (\$40 M)

Experience suggests that top-down efforts are very ineffective.

Better to activate bottom-up forces at the school level which address educational quality.

Premise: All children can learn more than our schools--and most parents--currently expect of them.

### General strategy

To develop a challenging, coherent, and concrete set of academic standards

to empower local schools to meet those standards, and to hold them

accountable for the achievements of their students.

### Key Words:

management by objectives

site-based management

accountability

### 1. Clear objectives

Develop clear objectives for our schools...

...an ambitious and challenging core curriculum that focuses on higher order thinking and learning.

Public Act 25 requires this...

...but State Board proposed core curriculum is weak conditioned by the status quo, and does not meet the needs of schools for serious and coherent guidance in raising their educational sights.

...Should follow lead of California and Connecticut.

NOTE: These must not be local standards...

...or Michigan standards  
...or even U.S. standards  
These must be world standards...

since our children must learn to compete  
in a global community

Hence, while educators and parents will be important  
in defining these objectives, so too will be  
“consumers” such as business, industry, and  
higher education.

## 2. Accurate assessment

Develop methods for accurately assessing student  
achievement...which are aligned with objectives.

Here, we have a good tool:

...the Michigan Educational Assessment Program  
...but it is strongly resisted by teachers and school  
districts

NOTE: Here it may be necessary to create truly  
independent assessment bodies...perhaps  
nonprofit corporations governed by boards representing  
wide constituencies

Telling schools, parents, students...colleges and employers  
...and the public...how our schools are doing.

## 3. Moving to site-based management

Breaking the chains of laws and bureaucracy that bind schools  
...allowing them to determine their own strategy for  
achieving the objectives

We must shift genuine authority and resources to the school  
level to give principals and teachers new flexibility to  
try new approaches, reallocate resources, adjust  
staffing, ...and make their schools work better.

A shift in authority to the school takes control away from  
state legislators, state officials, local school boards,  
and central district offices. All of these groups must  
agree to revoke existing policies that currently constrain  
school activities, and to forbear from enacting new ones.

Providing strong support:

...improved preparation of professional staff  
Michigan teacher education

Dominance of teacher colleges...

...produce 7,000 for 2,000 jobs

- ...have 3 of to 5 factories in US
- Clearly need an overhaul
- ...curriculum and materials development
  - Who? Michigan Department of Education?
  - Nonprofit entities?
- ...modern management methods
- ...exemplary practice sites
  - Michigan Partnership for New Education
  - Kalamazoo Area Math and Science Center
- ...school finance reform
- Allowing them to implement a variety of options
  - ...parental choice
  - ...alternative certification
  - ...longer school years
  - ...merit teacher reward systems
- Special needs:
  - Bring all children into the 3rd grade with solid skills in reading and mathematics
    - ...Full funding of Head Start for 4 year olds
    - ...Extended day kindergarten in poor schools
  - Provide extra support for schools that serve concentrations of poor children
- 4. Insisting on accountability
  - ...Outcome-based accreditation
  - ...Business actions:
    - Hiring decisions based on academic performance
  - ...Higher Education]
    - Minimum graduate requirements (with remedial education required of those not meeting admission requirements)
  - ...New state authority to take over failing schools
    - Those schools which are capable of moving toward objectives will be left alone.
    - Those which cannot will be subject to a number of actions
      - ...alternative management
      - ...consolidation
      - ...financial penalties

### **The Need for a New Coalition**

It is clear that our state is in the midst of a profound transition...  
 ...from an industrial economy based upon the abundance of natural resources, unskilled labor, and, to some degree,

constrained, slowly moving domestic markets...  
To a knowledge-based economy, characterized by intensely competitive world markets, rapid change, and--most important of all--educated people and their ideas.  
This has not been...and will not be...an easy transition to make.  
The impact of these changes are already painfully apparent to Michigan's workers and industries.  
The truth is that the outcome is still very much in doubt!  
Whether we will emerge from this transition as a world economic leader once again...with a strong, prosperous--albeit new--economy producing jobs and improving our quality of life.  
Or whether we will fail to heed the warnings...  
...to make the necessary investments and sacrifices today necessary for strength and prosperity tomorrow...  
And become an economic backwater in the century ahead.  
It is clear that we have arrived at a fork in the road ahead.  
My central theme is that education, broadly defined, will be the pivotal issue in determining which of these two alternative futures will be Michigan's...and America's.  
Indeed, I am absolutely convinced that the dominant issue of the 1990s will be the development of our human resources.  
Previous economic transformations were closely associated with major public investment in infrastructure such as railroads, canals, electric networks, and highways.  
In the coming economic transition, an equivalent infrastructure will be an educated population.  
If we are to respond, we simply must reorder the priorities of this state and this nation. We must shift away from the temptation to address only the needs and desires of the moment. And instead, we must begin to make some of the key investments necessary for the long term, the investments for our people and our children.  
Our educational system is complex and decentralized, with the primary responsibility located at the state and local level. There is no simple solution. It

is clear we must push on all fronts to improve the quality of public education. We must weave a strategy of many strands, a strategy that places existing programs in a larger context that establishes a clear sense of direction, develops leadership for the task, and assures continuity of effort. Above all, we must be consistent and persevere.

It is clear that the challenge of public education should not be just the worry of local communities, or state government, or universities. It is everybody's concern! Each of us must step forward and unite to face the challenge of the future. We must work together to build new coalitions, including both the public and private sectors, state government, education, business, and labor, to develop an agenda appropriate to secure the future of our children, our state, and our nation.

**We recognize that the choices before Michigan are not easy.  
The Challenge of Investment**

Years ago our parents stepped up to their responsibilities by sacrificing to give us an opportunity for a better life through education.

They had faith in education.

Now it is our generation's turn.

We must rekindle that faith

and that commitment to the future today.

We must care for our children's future as much as we attempt to our present needs and desires.

Today we are called upon to demonstrate a similar commitment to our children...to the next generation...to the future.

Education represents one of the most important investments a society can make in its future...since it is an investment in its people...

It is indeed the case that our state and our nation have developed the finest systems of public education in the world...

But we must also remember this resulted from the willingness of past generations to look beyond the needs and desires of the present and to invest in the future by building and sustaining educational institutions of exceptional quality--

Institutions that have provided those of us in this gathering today with unsurpassed educational opportunities.

We have inherited these marvelous institutions because of the commitments and the sacrifices of previous generations...and it is our obligation as responsible stewards--not to mention as responsible parents--to sustain them to serve our own children and grandchildren.

It seems clear that if we are to honor this responsibility to future generations, we must re-establish the priority of both our **personal** and our **public** investments in education, in the future of our children ...and hence in the future of our state and our nation.