

Flint Roundtable Crisis in the Workforce: Help Wanted

Introduction

Thank you for that introduction, Dr. Shick (Richard). About two years ago, I learned about the Help Wanted campaign at a meeting of the Business-Higher Education Forum, a Washington, D.C.- based organization of leaders from business and higher education, of which I am a member. The idea of the campaign excited me, for each of us had expressed our frustration that the quality of public education in America was the most serious crisis our nation has faced since World War II, but that there was very little public awareness, let alone consensus, about what to do.

Now there would be an opportunity to create an awareness campaign that would involve many segments of a community - government, business, education, the media, concerned citizens, and community leaders. The Help Wanted campaign was designed to draw attention to the threat of a poorly educated populace to our economic competitiveness and to offer strategies for improvement.

As I look around the room today, and as I view the list of activities that have gone on in the campaign, I can hardly imagine a more fitting setting for this effort. The obvious reason is the pain that this community has experienced. But to cite that as the primary reason would be a disservice to the Flint community. No, the reason that this campaign, this effort, has a chance for success in Flint is

the commitment that each of you is making to this region of the country an economic success story once again.

This collaborative venture has a chance because the Flint community has demonstrated that it can pull together in tough times to get the job done. I am proud of the University of Michigan's strong ties to this community and have seen and been a part of collaborative efforts that work. Let me also say how proud we are of the leadership of Chancellor Clint Jones, the officers of the UM Flint campus, the faculty, and the students and staff who play a special role in this community.

The Help Wanted campaign is an ongoing effort, but it seems fitting to offer hearty congratulations to all who were involved in organizing this campaign. Many organizations have been involved, and the sponsorship of the Flint Journal, WJRT-TV 12, the Genesee Area Focus Council, Flint Roundtable, G.M., the UAW and the Mott Foundation (and many more) was critical in getting this program off and running. I am glad that the UM Flint campus is also involved with this effort.

I've been asked to talk to you about how the business community and higher education can work together to improve education and to discuss how we can prepare students for college and make sure that the curriculum, both in K-12 and higher education, can relate to real work issues.

I have worked alongside the business community throughout my career as an educator. We've had honest, long discussions. I think that we've learned a

lot from each other. We have a lot more to learn, but we have realized that for business and higher education to achieve high standards of excellence and meaningful outcomes, we must collaborate.

Just over the last decade, the partnerships that have sprung up have been dramatic. Business has become much more articulate in expressing its concerns, its expectations, and its needs, and higher education has become more open and willing to adapt to the changing demands of the marketplace. I view these developments as very positive ones, and I am excited about the progress we are making. Certainly we have a long way to go, but we are learning each others' language, and more often than not, we view each other as genuine partners, with a real stake in each others' success.

So rather than telling you what you ought to be doing, let me offer some examples of what we in higher education are doing, to change our own culture and to improve K-12 education. These activities are not being done in isolation. They are being done in collaboration with business and education partners, and with local, state and federal government. The reform and improvement of K-12 education is a central concern for us, because this is our pipeline. If the pipeline is inefficient, and it certainly is, then we cannot fulfill our mission. We are extremely concerned, and are reaching farther and farther back into the K-12 system to ensure that more children can reap the benefits of public higher education.

And, as I will discuss later, higher education is changing as well. We want our graduates to be successful in the workplace, and to be part of an expanding, growing economy.

Personal Experiences

I'll begin by sharing some examples from personal experiences. In doing so, I also don the hat of Chairman of the National Science Board. The National Science Board is not only the principal body for science research, but is also the lead body which oversees most of the research associated with K-12 education in the country. This K-12 research is conducted mainly through the National Science Foundation, with roughly \$500 million worth of activity.

Over the last seven years, I've also chaired one of the principal standing committees of the National Science Board--on education and human resources--which oversees our K-12 education efforts.

And so it's from this perspective, as well as from the perspective of the President of the University of Michigan, that I'd like to make my comments to you this afternoon. And I'm going to repeat some statistics that you have probably heard, but in the context of this gathering, they bear repeating.

The State of K-12 Education

Last year I attended an international conference involving the top scientists, government officials, university leaders, and business leaders from around the world. At this meeting, a senior executive of Nissan pointed out that senior Japanese business leaders who had visited the United States considered America's greatest strength to be its research universities; its greatest weakness, however, was public education at the primary and secondary level. Quite a paradox. Quite a challenge, isn't it?

I am worried--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 every one of us is at great risk because of our serious under-investment in the quality of our human resources.

Graduation Rates and Literacy

The United States spends more on education than any other nation on earth, over \$328 billion, more than for any other public service. Yet, functional illiteracy in this nation currently runs between 20-30 percent, compared to a high of 5 percent in most other industrialized nations. And fully 25 percent of Americans fail to complete high school. Each year 700,000 students drop out of high school and 700,000 graduate without functional literacy.

Achievement Measures

We have often made the mistake of thinking that K-12 education is merely failing with minorities and at-risk students. But we know now that this is not the case and that the weakness of our educational system extends throughout all of our society. Even if we exclude those who drop out, we are presently only educating 15 percent to 20 percent of our students to an intellectual level capable of functioning well in the everyday world. In recent assessment tests it was found that only 20 percent of high school seniors could take a group of six fractions and put them in order of size. And only 5 percent of high school graduates today enter college ready to begin college level mathematics and science courses, or to approach the reading of technical material.

At every level of education, American children rank near the bottom in their knowledge of science and mathematics when compared to peers in other advanced nations. For example, compared to students in fifteen other nations, U.S. high school seniors scored among the bottom quarter on calculus and algebra achievement tests. Our seniors ranked fourteenth among fourteen nations in science achievement. This dismal performance is present at every level of American primary and secondary education, in essentially every discipline.

We are a sports-oriented society, and we like to frame issues in the sports vernacular, such as “being number one.” But public education is not a game. Rather, it is a deadly serious matter of raising a generation of Americans who will be able to hold their own in an increasingly competitive, increasingly complex, and increasingly science- and technology-oriented world.

In this new age, the age of knowledge, it is clear that our future will be in the mastering of science, mathematics, and technology. Yet it is clear that most American students today are simply not developing the knowledge base or the skills necessary to compete in this world.

The students in our classrooms today--students testing at the bottom of the heap in global terms--will be the backbone of our labor force in the century ahead. Indeed, they will be running this country within several decades.

We've heard many times over the last decade that we are a nation at risk. We will become even more so as we grapple with the extraordinary changes underway in our society, our nation, and the world.

What are the Problems?

The Last of the Smokestack Industries

As Albert Shanker has said, a fundamental flaw in our system of public education is our assumption that our teachers are the workers who have the task of delivering knowledge to our children. Such a system would make a lot of sense if we view the student as a passive object, passing down an assembly line, being worked on by others, the teachers.

What we need to do is stop thinking about how to fit teachers, students, and parents into an old-fashioned factory. Teaching should not be one of the last of the smokestack industries. Modern business is abandoning the factory model -- it's time for education to catch up.

The Blue-Collarization of the Teaching Profession

It seems clear that teachers are--or at least should be, regarded as--among the most valuable members of our society, since in a very real sense they are creating our future. And yet how do we treat them? We give them low salaries, low status and few rewards. We give them little opportunity for control of the curriculum and drown them in a mire of bureaucracy. We assign them the challenge of dealing with children from families in trouble, impoverished

backgrounds, dulled by the impact of television. And then we criticize them for not doing their job.

The Conflicting Missions of our Public Schools

Over the past several decades, we have assigned to our public schools a broader array of social roles for which they were unprepared, thereby undermining their primary purpose of education. We have shifted our schools' attention from the intellectual achievement of their students and more to concerns about social adjustment, individual realization, and group consciousness. Indeed, we have lost any coherent vision of the precise role that our schools should play in our society.

Family Attitudes

Perhaps it is the American family's lack of commitment to the education of children that most distinguishes us from other countries. We seem too busy to help our own children in their studies or to participate in their activities.

The Disintegration of our Social Fabric

Of course, there are many situations in which we cannot blame the family. Because for many children, the family simply doesn't exist.

Roughly one-half of the students enrolled in K-12 education come from what we used to call "broken homes." Except that in today's society this situation has become the norm rather than the exception. To this we must add the full range

of social ills, including drugs and crime. Of the Class of 2004 that started kindergarten this past fall, approximately 25 percent are living below the poverty level, 15 percent have physical or mental handicaps, 15 percent have been born to teenage mothers, and 10 percent have illiterate parents. And if you followed the series “Children in the Shadows” this spring in The New York Times, you’ve had a chance to read about the lives of ten different children across the country, who are struggling with such issues every day.

Public Attitudes

In fact, when it comes right down to it, how many of us are really willing to insist on quality in our schools in the face of the political pressures and costs which such a commitment will trigger? How many of us realize that what is at stake here is not just the future of our children, but the future of our nation and our way of life, not to mention our own personal well-being?

The Failure of our Universities

I've taken pot shots at various groups. Now let me also aim a few as well as higher education. Many of the problems faced by public education these days are our own doing. For years in most of our institutions the education of K-12 teachers was ranked among the lowest of our priorities. Indeed, in some institutions--including the University of Michigan--during the period of serious financial pressure in the early 1980s, we proposed that our schools of education should be eliminated.

Further, we have perpetuated the smokestack, assembly line approach to education, both in our educational programs and in our accreditation activities. We have not insisted on the highest standards and best preparation of those we admit to our teacher education programs. And we certainly have not adhered to the highest standards for our own graduates.

Indeed, we have allowed many of our schools of education to more emphasis on quantity than quality of graduates. It seems clear that our universities simply must step up to the challenge of increasing quality in our schools of education if we are to serve public education in Michigan.

Possible Solutions

The reform movement launched by the “A Nation at Risk” report ten years ago has weighed in with only modest improvement in the quality of our public schools. Yes, teacher salaries have increased; academic standards have been raised; and leaders in both the public and the private sector have become strong advocates for education. Yet we still have not made enough 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 to 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, perhaps by some school board members and superintendents, 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.

Some of you may be aware of the cross-national research studies of children's academic achievement conducted from 1980-1990 by Michigan Psychology Professor Harold Stevenson. Professor Stevenson found that American parents were not strongly impressed by criticism of U.S. education. As far as these parents were concerned, the relatively poor academic showing of U.S. students when compared to Asian students did not reflect the abilities of their own children or their children's schools. The problems existed only at other schools, and with other children. There was little evidence that American parents were motivated to seek improvements in the quality of their children's education. But the proof is there--even after a decade of heightened emphasis in the U.S. on mathematics and science education, American elementary school children lagged behind their Chinese and Japanese peers to as great a degree as they did in 1980.

But the U.S. parents interviewed over the course of ten years were pleased with their children's achievement, satisfied with the job their children's schools were doing, and believed that children's innate abilities guide their course of progress through school.

As Professor Stevenson has concluded, "Attitudes and beliefs are difficult to change. But the likelihood of improving the nation's competitive position through better education depends, at least in part, on changing such optimistic but ultimately self-defeating views."

The findings of Professor Stevenson, along with the findings contained in the research done by Yankelovich for the Help Wanted campaign, certainly illustrate the dual challenges we face.

So What Can Higher Education Do and More to the Point, What are We doing?

To begin, higher education must awaken to its responsibilities for the quality of public education in America, especially K-12 education. It is clear that we need to reach out more to school districts--working with them and responding to their needs. We need to work with our public schools to experiment with new techniques, new texts, new methods of instruction, new ways of organizing knowledge, and engaging students in the excitement of experimental problem solving.

I'd like to discuss some important examples of outreach and partnership to improve K-12 that are occurring at the University of Michigan. An important effort in this respect is the Michigan Partnership for New Education. This consortium, consisting of the state's three research universities--the University of Michigan, Michigan State University, and Wayne State University--is working closely with state government and the private sector to develop a model for higher education in America right here in the State of Michigan. The Partnership has worked to create a statewide network of 24 professional development schools to serve as working models of the new education, using state of the art knowledge about teaching and learning. The University of Michigan participates in two of these professional development schools in Washtenaw County. There are also 4

Partnership schools in Flint -- Gundry Elementary (Michigan State); Holmes Middle School (MSU); Brownell Elementary (MSU), and Northwestern High School (MSU). These partnerships are intended to improve teacher training for our schools of Education students as well as to improve teaching and learning at the local schools. Our top priorities with these schools are helping to redesign the mathematics curriculum and developing more effective science instruction.

In addition, Cecil Miskel, Dean of our School of Education, and the faculty of the School of Education have been working closely with the governor, members of the state legislature, and business and industry, to assist in designing recommendations for reforming our K-12 system. This is part of a 10-year effort by the National Business Roundtable to reform education in each of the fifty states. And the CEOs of these companies--including G.M., Ford, Chrysler, Whirlpool, K Mart, Dow, and Upjohn-- are directly, actively involved.

The University of Michigan is currently involved in more than sixty educational outreach programs in schools all over Michigan, some here in the Flint area.

I'll mention just a couple of examples of this outreach. We're active in efforts to increase the number of minorities working in the engineering field, beginning with middle school students. The Minority Engineering Program's outreach efforts include summer programs for middle and high school students. The Summer Engineering Academy, for example, reached over 700 students in grades 7-12 during the past two years.

We collaborate with other universities on these outreach efforts; I'm sure you're familiar with the King-Chavez-Parks Program, which reaches young people in

Flint and around the state in an effort to expose them to the college experience. The DAPCEP program, or Pre-College Engineering Program, which was co-founded by the UM, reaches over 3000 students annually, working with engineering professionals from companies all over Michigan.

I'm very familiar with these particular programs, which are affiliated with the College of Engineering, where I served as dean, but there are efforts like these at each of our three campuses. And we're continually refining and expanding them. We know that we have to do more.

And what about our own Universities?

We are re-examining our priorities and asking ourselves whether we should not put a much higher priority on preparing talented graduates for careers in primary and secondary education. In this regard, we must pay particular attention to our own schools of education. Traditionally, these units have had the lowest status of any of our academic units on our campuses. During the 1970s and 1980s, our education schools were regarded as a haven for mediocre students and mediocre faculty. It is ironic that if one looks at the reform movement over the last few years, there is very little mention made of our schools of education. It is clear that our universities need to mount much more effective programs to train teachers, principals, and superintendents.

We are also trying to set the pace for public education in America by insisting on far higher entrance requirements and in communicating these clearly to parents and prospective students. In this way, we may be able to generate the necessary pressures for reforms of our public schools. I believe that we must

constantly raise our expectations, all the while reaching back to make sure that the students who want access to higher education, and who must have it, will be ready for it.

And what about higher education's role in preparing graduates for the workplace?

Business and higher education, as I said earlier, are listening to each other. Allow me to share with you some of the early outcomes of this ongoing discussion. I will focus on two areas: undergraduate education and revising the curriculum in our business schools to reflect the demands of the global economy.

Undergraduate education

Undergraduate education is one of the University's most important missions. I'll quote from a report of the Carnegie Foundation for the Advancement of Teaching: "The aim of the undergraduate experience is not only to prepare young people to be productive, but also to enable to live with dignity and purpose; not only to generate new knowledge, but to channel that knowledge to humane ends, not merely to study government, but to shape a citizenry that can promote the public good." In a recent report, the Education Commission of the States noted that "it is time to increase public awareness about the condition of undergraduate education in the nation's colleges and universities. The Commission called for a transformation of the total undergraduate experience, and not just the curriculum."

The pressure is on higher education to prove that undergraduate education is directly linked to the country's social and economic well-being and the challenges we face as a nation.

For the last two years, the UM - Ann Arbor has undergone an intensive self-evaluation of the undergraduate experience. The results? Well, we're just getting started, but I can report that: the math department has interested a wider array of students in its courses and has retained more people in majors. As a result, the department is leading the nation in a rejuvenation of introductory mathematics. A student-faculty research program, (UROP) in which individual faculty and undergraduate students work together, was expanded. This important program provides hands-on opportunities to translate theory into experience. The Dean of our College of LSA initiated a well-funded program to reward excellent teachers. The chemistry department fully revised its introductory courses to broaden its appeal and the department dramatically increased its number of student majors as a result. Academic support programs in the residence halls have been established to help undergraduates pursue academic interests outside the classroom, and resident advisors provide information on course requirements and deadlines. These are just examples of the improvements we are making. We have also made improvement of undergraduate education a top priority for our five-year Campaign for Michigan. We're determined to make sure that the undergraduate experience prepares our students for the enormous challenges they will face once they leave the University.

Another example from one of our professional schools

Perhaps one of the best examples I can cite of higher education's response to market forces is evidenced in our Business School, where my colleagues are implementing a number of reforms. I'll cite one example -- the MAP, or Multidisciplinary Action Project. MAP is action learning that occurs inside companies. It is based on the idea that in business, if you cannot convert your ideas into action and results, you will not succeed. For seven weeks, 400 students in 60 teams guided by the faculty take on operational improvement projects in 48 companies. The goal is to enable students to apply what they have learned in courses to become proficient in the skills required to achieve world class quality, cost, delivery, cycle time and innovation. Students analyze a business process, come up with ideas to improve it, and present those ideas, with an implementation plan, to the faculty and business people. The program is very similar to the experience of being a medical intern, making rounds with experienced physicians, coming into contact with real people and real-life situations.

All over the University, faculty, staff and students are working together to develop an experience that will prepare them for the workforce. We have much to do. We are committed to doing even more.

Even the University culture itself is changing, as we move toward our own version of a TQM approach. No, we aren't doing it the way business has done it. We're doing it in a way that fits with our unique mission of teaching, research and service. We're just beginning, we're struggling with it, but we are also going through what most businesses have in an effort to improve our quality and our productivity.

We want to reach out to our colleagues at our community colleges, such as Mott, and to vocational schools across the state. At the UM last year, our research expenditures were over \$346 million, the largest research program of any university in the nation. This research works for Michigan. It equals new enterprises, new jobs. We want to work with our colleagues at other institutions to make sure that this innovation is transferred successfully into the marketplace.

Just a couple of months ago, I participated in the announcement of a \$120 million package of private, state, and federal funding that will result in research and development of high definition flat panel screen television technology for navigation systems and consumer electronics. Our partners in this effort include Washtenaw, Oakland and Henry Ford community colleges, who will develop and implement worker training to build these screens. This technology has the potential to be a multi-billion dollar industry by the end of the decade. This is a concrete example of how partnerships among industry, higher education and community colleges, the federal government, and state and local government can work.

I've talked about our challenges and the ways in which we are meeting some of those challenges. But I would be remiss if I left here today without telling you that I believe strongly that additional support will be needed to make long-lasting change.

We need a system reformed to the point where public support for public education is elevated to a priority--particularly in this decade of change. Since education is the real key to our future, it seems appropriate that we place a higher value on it.

In particular, in Michigan we simply must re-shape our state's priorities to bring a better balance to school finance by viewing education as an investment in the future that deserves a higher priority than our immediate needs.

This state's priorities are going through a reorganization right now. Witness the protection given to K-12 and to higher education in state budgets over the past two years...although even that protection has been inadequate. We need additional revenue sources.

Proposal A failed. We could talk about why it failed, but it's most important that we talk about the future, about how we are going to finance education, and how we can convince voters to make education a high public policy priority, by cutting property taxes and generating the necessary school financing revenues. We must come to grips with serious equity issues, leading to extremes between rich and poor school districts.

The future of Michigan's economic base must not be ignored, and we must live up to the hard, harsh reality.

In the last two decades, there have been twelve proposals placed on the ballot. Many of us have agreed in the past that the status quo was unfair, ineffective, and a threat to our future. Yet in each of those twelve trips to the voting booth, because voters looked at their own neighborhoods and not the state of Michigan as a whole, the proposals were defeated. Now, it's time to step up to a statewide perspective and a long-term commitment. We must continue to try to find some resolution to these issues.

Higher education has a major stake in this; the K-12 system is weak and we're concerned about the pool from which we can draw. K-12, community colleges, and higher education--we have come to see ourselves as a seamless web because we're all in this together.

Some might think that as a university President, I was really self-serving in my support of Proposal A. Prior to the defeat of Proposal A, we heard some speculation that if Proposal A were defeated, there might be further raiding of the state's general fund budget, and this could lead to cuts in the higher education budget. Make no mistake, this scenario worried me then and it worries me now.

But more disturbing is the thought that voters might not think in terms of what is good for the entire state and the entire public education system.

At Michigan, we are committed to excellence and refuse to sacrifice quality (witness our \$1 billion Campaign), but K-12 and community colleges do not have our capacity to raise private funds. They need adequate assistance to cope with the erosion of their capacity to receive adequate funding.

The same resolve demonstrated by the U-M must be demonstrated by private citizens, and facing the fact that we must substitute sales tax for property tax will be difficult, but it must be done. I say that we must get on with it.

A Plan for Michigan

I'd like to wrap up with a list of recommendations that the group I mentioned earlier, called Michigan Business Leaders for Education Excellence (Business Roundtable, the Governor, the Legislature, Michigan Partnership, and others) has come up with for improving K-12 education. These are very simple steps, but they are the bread and butter of improvement. And since these recommendations were made, about a year ago, the group has begun working on a "report card" and a "gap analysis" to see just where we stand. We need benchmarks if these recommendations are to take hold and grow roots.

Michigan's system of public education is massive and complex, including:

- 562 districts
- 1.5 million students
- 82,000 teachers
- 7,500 administrators
- 65,000 other staff

It should be apparent from these statistics that top-down efforts will be very ineffective in achieving reform of such a massive system. Rather, the key is to activate bottom-up forces at the school level--both from within and from without--which address educational quality.

When we started working with the Education Excellence group, we began with a very fundamental premise: all children can learn more than our schools--and most parents--currently expect of them. We must develop and implement a set of challenging, coherent, and concrete set of academic standards; empower local schools to meet these standards; and hold the schools accountable for the achievements of their students. We should focus on these key themes:

- Management by objectives
- Site-based management
- Accountability

More specifically, let me suggest the following set of actions:

1. Development of clear objectives

We must develop clear objectives for our schools. In particular, we should develop an ambitious and challenging core curriculum that focuses on higher order thinking and learning. Fortunately, the Michigan State Legislature has taken action within recent years through Public Act 25 to require this action. Unfortunately, primary responsibility has been assigned to the State Board of Education, and thus far, this body has proposed a core curriculum that is quite weak and conditioned by the status quo. It clearly does not meet the needs of schools for serious and coherent guidance in raising their educational sights.

Here it is important to realize that we cannot be satisfied with local standards, or Michigan standards, or even national standards. We must set true world standards, since our children must be prepared to compete in a knowledge-intensive world society. Further, while educators and parents must be involved in defining these educational objectives, so too must be “consumers” of the products of public education such as business, industry, and higher education.

2. Accurate assessment methods

Second, we must develop accurate methods for assessing student achievement, and these methods should be closely aligned with the objectives set by the core curriculum. Here we already have one tool: The Michigan Educational Assessment Program. However, this program is currently underfunded and controversial. I know that many teachers and school districts are resisting it quite strongly. In the face of this resistance, it may be necessary to create truly independent assessment agencies outside of government, such as nonprofit corporations governed by boards representative of wide constituencies. However we approach assessment, it is clear that one key to the reform effort will be our capacity to tell schools, parents, and students, colleges and employers, and the public at large just how our schools are doing in meeting the high standards we must set for them.

3. Moving to site-based management

This part of the plan will undoubtedly raise a few eyebrows with this audience. We must allow our schools to determine their own strategy for achieving objectives. We could shift authority and resources to the school level to provide principals and teachers new flexibility to try new approaches, reallocate resources, adjust staffing, and make their schools work better. Of course, such a shift in authority to the local schools will take some control away from state legislators, state officials, local schools boards, and central district offices. All of these groups must agree to eliminate existing policies that can constrain school activities.

Our schools will need strong support if they are to move toward ambitious curricular objectives. To this end, we must clearly improve the preparation of

professional staff. Our present system for preparing teachers and administrators, largely based on the “teachers college” tradition of years past, must be overhauled. We must also give more attention to curriculum and materials preparation. Administrators must be trained in modern management methods. And we need to establish models of outstanding schools through efforts such as the Michigan Partnership for a New Education and the Kalamazoo Area Math and Science Center.

Further, we must recognize that different areas will need to adopt different strategies to achieve the quality of education our state and nation requires. For example, for some areas, parental choice will be an important feature to create the free market necessary to drive change. In others, the use of alternative teacher certification will be useful in attracting the very best talent into the classroom. Eventually it seems clear that we must move to longer school years, perhaps along the lines of Europe and Asia. And, as I have noted earlier, we must take strong action to make teaching a true profession once again, including clear rewards for high merit.

Of particular importance will be addressing the needs of schools serving concentrations of disadvantaged children. We should set as a goal the challenge of bringing all children into the primary school years with solid skills in reading and mathematics. For example, it seems clear that important programs such as Head Start should be fully funded. Further, extended-day kindergarten will prove useful in impoverished neighborhoods. Schools facing the heavy burdens of poverty will require additional public support.

4. Accountability

Finally, after setting clear objectives, implementing accurate assessment measures, and providing schools with the flexibility and support to achieve these objectives, we must insist on accountability. To this end, statewide outcome-based accreditation will prove useful. But perhaps the most important accountability will be provided by employers and higher education.

Business and industry must make student achievement a key component of hiring and advancement decisions. If employers begin to weigh student achievement in K-12 heavily in their hiring practices, then the message will rapidly permeate public education that there are strong rewards for school performance.

So too, higher education must set clear and high standards for admission to their institutions. Here I should note that the Michigan Presidents' Council, comprised of the presidents and chancellors of Michigan's fifteen public campuses, has reached agreement on a set of minimum standards which will go into effect in 1995. To be eligible for normal admission to any of Michigan's public universities, Michigan high school graduates must have met these requirements. To accommodate those students who have not had the opportunity to achieve these academic objectives, universities will have the flexibility for provisional admission--with the requirements being met through remedial, non-credit instruction on campus.

Finally, it will be necessary to have authority to address those situations--which we hope will be rare--in which schools simply are unable to make progress. For example, there should probably be state authority to take over failing schools.

Other actions such as district consolidation, alternative management, and appropriation levels may be necessary to motivate the reform movement in some schools.

Concluding Remarks

Our education system is complex and decentralized, with the primary responsibility located at the state and local levels. There is no simple solution for improvement. 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.

Today I have focused on K-12 and higher education. There is also the important role of our great system of community colleges, such as Mott, and our vocational educational centers. There is simply a great deal to be done. It is clear that the challenge of public education should not be only 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.

What must business do? The real question is what must we all do? 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.

Michigan, indeed America, continues to be blessed with abundant natural resources and people of great strength. But the handwriting is on the wall. If we

are to prosper in an age of knowledge that is almost certainly our future, we must join together now to restore both our public and our personal investments in education, in our people and their ideas, in our children, and in our future.

June 23, 1993