

Education for the future

by Dr. Matthew Prophet, Superintendent
Portland Public Schools



[The following are excerpts from a speech to the Portland Chamber of Commerce on January 11th.]

In this country there is a rapidly growing gap between the needs of our highly technical information age and the education and training of our work force. Unless we—as a nation—take immediate action to properly prepare our populace for the economic realities of the post-industrial age, we will continue to lose ground to other nations of the world. As you know, many of them are at this moment making a concerted national effort to gear up for competition in the international marketplace.

Authorities in virtually every sector of our society suggest that the key to advancing our economy, strengthening our position in world markets, maintaining our national defense, and moving our nation into the post-industrial age, is technology. Just as the evidence that technology is the key to attaining our national goals in each of these areas is overwhelming, so is the evidence that education is the key to technology.

A review of our current economic situation tells the story.

The U.S. rate of productivity has declined each year since 1965, and the actual level of productivity has decreased since 1979.

Management analyst Peter Drucker anticipates that through the 1980s and 1990s 10 to 15 million manufacturing jobs will disappear from the American landscape. Even if Drucker is half right, imagine the economic, social and political panic created in 1980-81 by the loss of a mere 300,000 auto industry jobs multiplied many times.

We are already facing the economic consequences of becoming technologically inferior in the manufacture of automobiles, radio, television, high fidelity, tape and video recording, and a host of other electronic industries. Now we face the compounded consequences of becoming inferior in the microcomputer and memory chip industries. Japan already holds 70 percent of the world market in 64K memory chips and is currently working on a one megabyte chip.

Following Japan's lead, France has formed its ministry of research and industry. The French ministry is launching eight separate projects to design commercial high technology products. This five-year, \$20 billion effort to build France into the world's third technological and industrial power, alongside the U.S. and Japan, is underway.

Germany, another rival in the world marketplace, has not lost the message of the Japanese and French. Germany is also pushing hard to automate its industry and move into higher technology industries.

Even Third World nations with their abundance of low-cost labor threaten to attract assembly work away from the U.S.

The evidence is clear from what is happening internationally that there is a need to address this issue.

How then can the U.S. maintain a lead in some technological areas and make gains in those areas in which we are currently behind? Clearly we cannot rely on internal monetary policies and tariff barriers when an important portion of our gross national product comes from international trade.

If we are to retain and keep pace with the technological advances of our foreign competitors it is necessary for the education sector to aid in the response.

The educational community must help our nation become effectively competitive in the high technology industries by developing the human resources upon which a technological base is dependent. We must educate, train and retrain our populace for the information age.

It seems clear that the United States lacks the national goals, the public policies or even the vehicle to focus discussion and debate in the reconstruction of science and mathematics education. No other industrialized country has defaulted on the education of science and mathematics teachers to the extent of the United States.

What are the implications of such a lack of national commitment on our need to be competitive in a world market becoming dominated

by advanced technology? At a time when it is becoming more and more important to train our students for a post-industrial world, we are still producing scientifically and technologically illiterate high school graduates—the fastest growing minority group in America.

What can we do? Unfortunately, the future looks grim. Realistically we can expect little help from our national or state governments. On the national level our leadership is working hard to cut back spending in all non-military areas. Education has, for example, been the recipient of severe cuts from the federal level.

The current state of our economy makes it impossible to expect more help from the state level and, in fact, reductions are likely.

While not all of our youth will seek employment in high technology industries, they will all need to be aware of communications technology if they are to be prepared to survive in a technology driven society. The future adult who is not aware of technology will be as disadvantaged as those today who cannot read.

But we can't afford to do this job alone—in fact, I'm sure you would not want us to do it alone. While the cost of technology has decreased dramatically, to prepare our youth to be technologically literate will require a major investment. This cost can and must be shared by the entire community. Businesses can help by sharing your expertise, by being on our advisory committees, by sharing your personnel and facilities, so that our students can learn the practical application of technology.

In December of 1980, the Portland Board of Education adopted the concept of partners in Portland education. This concept encourages the District to work closely with the Chamber of Commerce to develop a school/industry partnership. The Chamber Board has recently commissioned S.R.I. International, affiliated with Stanford University, to conduct a study to identify, among other things, those industries most likely to play a significant role in economic development. In working with the Chamber we hope to build partnerships between businesses in those identified industries and build appropriate vocational programs within our schools for those industries.

In addition to increasing our cooperative efforts with the private sector, we are taking the following actions:

First, we have created an office of instructional technology to spearhead our efforts to move our district into the information age in a timely, productive and cost-effective fashion.

In addition, we have carried out a broad-based districtwide planning effort involving teachers at all levels, administrators and support staff, and members of the Portland State University Department of Education. Out of that "Information Age Planning Conference" has come a set of recommendations for the District's involvement in instructional technology.

Now students in Lincoln's foreign language programs will be able to communicate by voice on a regular basis with students in foreign countries as a result of this project. Such communications will enhance the Lincoln international studies magnet program. Initially, Lincoln students in Russian language will communicate with students in the Soviet Union and Lincoln's students of Japanese will be communicating with students in Japan.

This project is a good example of our desire to go beyond computers, to enter the entire range of instructional technologies and to include the entire span of the curriculum in our efforts.

We are also considering the development of a computer network that will, in its first phase, link our ten high schools together by computer. We intend to communicate between schools by electronic mail, and to establish a solid intercommunications system among the ten schools.

Each of the high schools is already involved in some preliminary planning for a pilot project of its own and will be able to share its progress via computer communications. I.B.M. has agreed to provide substantial support for this project. If it is as successful as we anticipate,

I.B.M. has agreed to support us in adding to the system in a very cost-effective fashion.

One element being considered for the integrated network between the high schools is that of individual pilot projects. Examples of these include computer aided design and manufacturing (including drafting) robotics, computer graphics and microcomputer construction, repair and maintenance at Benson High School. Wilson High School is considering the use of electronic libraries such as "Dialogue," "CompuServe," and "The Source" to conduct research and Roosevelt hopes to become involved in a user-directed computer counseling network, a career information program and administrative uses of computers.

Cleveland intends to soon become involved in a conference phone network to local and state businesses and agencies in a project being sponsored by AIS Division of American Bell.

Jefferson is exploring certain innovative computer applications. They are giving consideration to the introduction of utilizing the computer to assist in Art and Music instruction, interactive television, expansion of basic skills applications, staff training, and possibly the establishment of a computer demonstration center.

In addition to the programs I have mentioned, this District already has 418 microcomputers and computer terminals in place in our schools for use in instruction and management. That is one for every 108 students in Grades 1-12. We have developed a K-12 learning plan in computer science and a course outline titled *Introduction To Computers* and we have one of the most sophisticated non-commercial television studios in the state—to enable us to tap into cable innovations.

Our target is to have all students become computer literate—to learn how the new technology can be used to solve our problems.

We are looking closely at our entire range of educational programs, including special education, talented and gifted, English as a second language, and various other special programs to determine how we can strengthen them by the use of modern technologies.

In order to address the problem of skills deficiencies among a segment of our students, and to do everything possible to ensure that all students meet the increasingly demanding graduation requirements, we are now in the process of evaluating several computer-assisted instruction pilot projects designed to help students who have failed in one or more areas on our District-wide levels test. We are looking to develop the best possible approach to basic skills remediation in cooperation with private sector companies.

Elementary schools across the nation are becoming increasingly involved in the use of computers in instruction. This district is taking a hard look at two particularly promising programs: Apple Logo and I.B.M.'s "Writing To Read" programs. Each of these is being examined as possible pilot projects for elementary schools.

We are also concerned about the human element. Our use of machines is intended to enhance rather than replace the personal role of the teacher in our classrooms. As we move heavily into the use of such tools—as I believe we must—it is essential to address the human and interpersonal issues to be faced by both our students and our staff members.

Portland can lead the way in this country in ultimately bringing educational costs down and increasing educational productivity. The program I have just outlined is an ambitious one, but is reachable through a cooperative effort within our community. It is one that the School District can not do alone. We have neither the resources nor the staff. Nor can it be done overnight. It will take time and the combined efforts of all of us. We are competing with highly technically oriented countries which have adopted national goals in these technical fields. We need your help!

Our goal is to develop a strategic vision that brings the best resources of business, industry and education into a concerted effort to allow for the kinds of changes that

are essential to the survival of public education in our rapidly changing society. At the same time we intend to increase (not decrease) human to human interactions and to provide a more humane educational setting. By making the very best use of people, instructional tools, management skills and tax dollars we will achieve that vision.

I hope that you will join with us in making your resources available—either through providing experiences in your industries or in sharing your resources with our classrooms. Together we can help our society overcome computer anxiety, and move forward as a community into this new age. *Time* magazine names a computer the "man of the year" and the Portland schools will prepare our youth to use "that man" for a more productive tomorrow.

Ralph's Hollywood Florist
Flowers From Hollywood
IN YAWS RESTAURANT
2005 N.E. 40th
Portland, OR 97212
249-1888
We Deliver Anywhere
VISA



My husband and I did everything together. We even decided on our funeral plans together.

When John died it was much easier for me. There were so many things that had to be done. I know I carried out his wishes because we discussed them ahead of time. We even had money put aside in a special plan available through our funeral home. It was a great relief. I wish more people knew about it. If you'd like information call or write for our free booklet on funeral planning.

CALDWELL'S
COLONIAL
MORTUARY

N.E. 14th at Sandy Blvd. and Burnside
Portland, Oregon 97232
Phone: (503) 232-4111

Street Beat

by Lanita Duke and Richard Brown

January 15 is the birthday of Dr. Martin Luther King, Jr. The *Street Beat* team wondered, "Do you think King's birthday ought to be declared a national holiday?"



Bruce L. Chapman
Retired

Yes. Look at all the great things he did for the country. Equality for all men and not just one race.



Terry Johnson
Housewife

Yes. He did a lot for our country. He did a lot in the Civil Rights Movement. He lived for the people and he died for the people.



Teresa Husman
Homemaker

I think it should. He stood up for what he wanted. Other people's birthdays are holidays. Why not his?



Evelyn Tillman
Clerk

Yes. He was a black man that helped America. Not just for blacks but all Americans.



Linda Bell
Housewife

By all means. They declared George Washington. They should declare King. He lost his life for what he believed in—making this country great.



Henry Gray
Production Worker

Yes, I do. He did as much for the country as anyone else. He just wasn't a president. Maybe if he had lived he could have been president.