

BUSINESS

THE BOSTON SUNDAY GLOBE • DECEMBER 13, 1992

My Turn

DON REED

Rebuilding the US to first in science

Less than 30 years ago, the United States led the world in the per capita number of scientists and engineers graduating from our colleges and universities. Today, for every 1,000 gradu-



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ates in the United States, seven are engineers, while Japan has 40 engineers for every 1,000 graduates.

With this shrinking pool of talent, how can American business compete in this global economy?

Moreover, how can we as a nation effectively evaluate public policies involving major scientific and technical choices?

There are three solutions: excitement, exposure and education. American business must take the lead in these areas for the sake of our nation's future scientific literacy and capability.

US First - a coalition of business, education and government leaders - was founded a year ago to advance science and technology by motivating the next generation through national corporate-sponsored programs and efforts.

It recognizes that more of our youth need to comprehend the excitement and intellectual challenges inherent in science and engineering. We need to create a broadbased desire for technical knowledge.

US First has begun to apply the precepts of marketing to science education. Our coalition is working to align major US businesses around this approach and seek their strategies and support. By working with companies like Xerox, Nynex, Motorola and Boeing, we plan to tap youths' natural desires to learn and achieve.

We believe that given the motivation and opportunity students will want to use their talents. In team or competitive settings, they will be able

to learn from each other or specialists in the field. We expect to reach as many students as possible with a message: Science is fun and rewarding.

The team approach is central, for it builds on ingrained admiration for successful athletic competitors. Last year we launched an annual national competition among high schools. About 28 schools, businesses and universities such as MIT participated in our first engineering tournament. Radio-controlled "robo-athletics" competed in elimination matches. Teams of students and corporate engineers built the devices from standardized kits.

President Bush was also on hand for this NCAA-like tournament and later invited the winning team, Clinton High School/NYPRO Inc. of Clinton, Mass., to the White House. Many students said the event deepened their appreciation of engineering and of their own school programs. We expect 60 teams to compete this February.

US First is also working to establish a science and technology Hall of Fame in mill buildings in Manchester, N.H. We expect this city to be to science and technology what Canton, Ohio is to football, Cooperstown, N.Y. is to baseball and Springfield, Mass. is to basketball.

In the hall, students will have the opportunity to explore the complexities of electronics - the basis of many of today's products. Students will be able to find role models in our scientists and math specialists, just as corporations and the media have done for rock stars and athletes in the last decade.

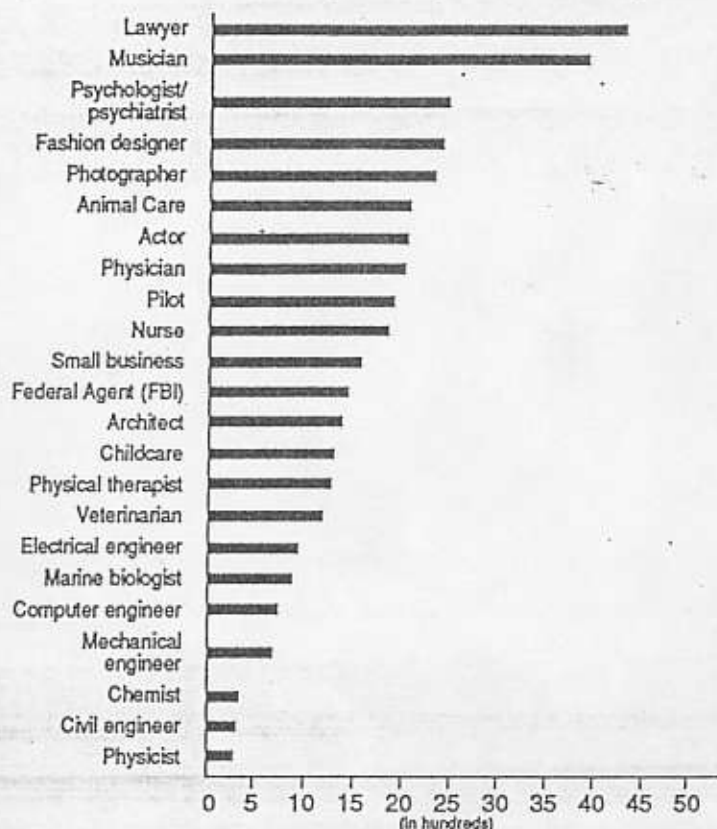
Students also need to know that the inventors of Nintendo and the laser disc are just as important and successful as an entertainer or athlete. They will come to understand that like top athletes, scientists and engineers also fulfill their personal goals and make dramatic contributions to society.

The US First strategy may be the most comprehensive program to make this kind of learning as popular as possible since the Russians launched Sputnik a generation ago.

► Don Reed is chairman of US First, and is executive vice president and chief operating officer of New England Telephone Co.

When I Grow Up I Want To Be...

Top career interests of Pittsburgh-area high school students, 1990



Source: Exploring Division, Boy Scouts of America

A 1990 survey of 56,000 high school seniors in the Pittsburgh area found that most students have little interest in pursuing careers in math or science. "It shows that U.S. students have a value system that is just the reverse of students in Japan and Germany," said Thomas Murrin, Dean of the Business School at Duquesne University in Pittsburgh and a Council Executive Committee member.

Bombarded with TV images that celebrate musicians, actors and lawyers, U.S. students may be shying away from careers in math, science and technology, according to many experts. "If Bill Cosby had been an engineer than who knows what kids would chose," said Mark Gilmour, an Alcoa employee who works with the Exploring career program, which conducted the survey and sponsors a co-ed career mentoring program. Gilmour has discovered that kids are making their career choices by the 6th or 7th grade with little input from the schools. "It's crucial to open kids up to all the different career possibilities but that is up to the adults in their

community," he said, adding that it is often difficult to get busy working people to volunteer even two nights a month for the program.

In addition to mentor programs like Exploring, many experts believe that getting kids interested in technical careers requires fighting fire with fire. U.S. First, which is working on innovative ways to popularize math and science careers, is one such group (see related story).

U. S. First "Markets" Math and Science

To increase student interest in science and math, U.S. First is seeking business participation in its second annual engineering competition.

Merging Madison Avenue marketing techniques with science and math, the First Encounters Engineering Competition teams students with high-powered engineering teams from companies like Motorola, Xerox and IBM to produce remote-controlled mechanical vehicles that are tested in a series of events.

The goal, according to U.S. First, is to help young people see that science and math can be as fun, exciting and rewarding as playing basketball or being a fashion model.

With the help of games, contests (prizes include everything from a helicopter trip to a limo ride), celebrities and the mass media, U.S. First hopes to capture students' interest. The creative engineering competition, co-sponsored by the Council on Competitiveness, is a central part of such efforts. Regional competitions will be on Feb. 19 and 20, 1993, and the national championship will be on Feb. 26 and 27. For more information, 603/666-3906. ■

NATIONAL AFFILIATES

More than two dozen trade associations, professional societies and research organizations participate in the Council's work as National Affiliates.

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American Council for Capital Formation
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Changing your address? Please send the current mailing label with your request for changes to: the Council on Competitiveness, attention of Ms. Stephanie Schoumacher.

Council Sponsors Tech Conference

The Council on Competitiveness co-sponsored a special Technology Symposium as part of the 1992 National Medal of Technology awards last month.

The symposium, also sponsored by The Foundation for the National Technology Medal, examined such topics as how

changes in the defense industry will affect new technology development, and the role of technology in economic growth and competitiveness.

The medal, which recognizes scientists, engineers and companies, is the highest honor bestowed by the President for technological achievement. ■