

I Want America Back!

Remember when we—our businesses, our industries, our government, and our educational institutions—focused on the basics? The very foundation of what made America strong has been eroded to the point where we are often victims of self-serving decision-making and lack of informed leadership. Our capital-intensive businesses and industries are at more risk today than ever before. But the analytical tools and technologies available to improve reliability have blossomed over the past 20 years. Given these tools and technologies, we should have the most productive, reliable plants and facilities in the world. Are we there yet? No, not yet.

Maintenance methods and process reliability have improved significantly with the advent of state-of-the-art diagnostic technologies. For example, ultrasound technology lets us detect problems that we normally cannot spot with our senses: leaking valves, loose and arcing electrical components, and other high-frequency warnings in hard to access places. Vibration analysis technology let us peer into machinery components to detect the earliest warning signs of deteriorating bearings, looseness, and out-of-balance conditions that we could not detect otherwise. Oil analysis, among other things, helps us understand the amount of wear on specific components inside gearboxes and hydraulic systems. Infrared inspection cameras provide insight to temperature differentials that can cause mechanical and electrical equipment failures. And the list of new maintenance tools that help us and our maintenance technicians improve equipment reliability goes on. So where's the gap?

What good is all this technology if the mechanic does not know how to properly inspect, remove, replace, repair, adjust, or calibrate the problem component? What good is this technology if the technician does not know the inner workings of the very machines and components being analyzed to be able to pinpoint not only the problem but the possible causes? How efficient and effective is our maintenance organization with an experienced yet untrained workforce? Sure, they can be trained in the reliability tools. They can be trained to interpret the reports from these tools. But, without the FUN-DA-MEN-TALS, the basics of good maintenance methods AND equipment-specific skills and knowledge, they become parts changers only hoping that the problem will eventually be corrected. I have addressed the deterioration of our education and training systems in prior columns, but let's explore it from a different perspective and get back to the basics.

Remember how we learned to work on things when we were growing up? We can answer that question several different ways depending on our age. Let's focus on those who are exiting the workplace. Many of those between the ages of 60 and 70 would say they learned to make things, build things, and fix things from dads, grandpas, uncles, aunts, moms, etc. They would also mention skills learned in school, shop classes, projects they constructed, and even hobbies.

They grew up in the WWII era through the 1950s when high-school graduation became a high priority in America. The number of high-school graduates more than doubled between 1950 and 1975. With the Baby Boomers came a renewed enthusiasm for education: A high school diploma was a must, and later a college degree was the ticket to success. Still, back then, there were three basic choices in school: college preparation, general education, or vocational education. Parents, teachers and counselors placed a high priority on "career" preparation versus "gainful employment" immediately after graduating. There were still those who finished high school and went to work in

factories and mills with little or no advanced education. They did fairly well as long as the jobs remained stable. All of this has changed, and we are rapidly becoming a nation at risk.

Today, three big factors are having a significant effect on established businesses in America: retiring Baby Boomers, a society that values a college education at the expense of “career preparation” in a balanced social-economic system and disconnected decision-making by politicians (our “representatives”) and corporate leaders. Look what’s happening today: The high school dropout rate is 30 percent. These dropouts and a large number of public school students are denied meaningful and appropriate educational preparation, but we have an increased emphasis on a college education in our public school systems.

Our school teachers today cannot easily deviate from a standardized curriculum in their classes. The federal and state governments base their financial support to schools on student test scores as a determination of the effectiveness of teachers and schools. Our federal government’s and our Department of Education’s initiative *No Child Left Behind* has emphasized test scores and college preparatory studies for students. So, if a parent does not reinforce study habits, homework, and meaningful classes projects, or if teachers are not allowed to give homework, or if extra-curricular activities take time away from education, what do test scores really show? They truly say “Johnny has not learned...” But the bureaucrats and politicians seem to believe that the schools are not doing their job and teachers aren’t teaching. So the pressure is put on schools and teachers rather than where the problem is rooted: students, parents, and societal pressures.

The very system that was intended to advance our children’s education is actually leaving children behind—behind in careers and behind in life.

As educators, we used to be able to recommend that some students were better suited for “higher education” and college degree studies and other students were better suited for “career preparation” and vocational-technical studies. In many states today, that is against policy or is illegal: Students can no longer be “tracked” into one educational path or another. So, what happens to the “non-college-bound” students? They struggle! What are their options? Do they even know what their options are?

Here is one example of an educational disconnection: Recently, a vocational high school that serves an entire county school system in Michigan cut back some of their traditional vocational programs (welding, auto mechanics) because of teacher shortages, fewer interested students, and administrative decisions. One recent administrative decision to significantly reduce the size and offerings of the Automotive Service Technology program was based on the fact that the “automotive industry in Michigan is downsizing, so we’ll need fewer mechanics.” Wait a minute! Will people in Michigan be driving fewer cars and trucks? Will the need for auto maintenance and repair decline because Michigan is making fewer vehicles? No! But that is the kind of thought process that disconnects public education from the actual needs of society.

Big corporations also make changes that affect how things get done without considering or getting the buy-in from the people closest to what is being changed. Corporate decision-makers need to realize that the very wealth they hope to create is generated on the plant floors and not in the board rooms. Executive thinking and planning in a vacuum often lacks a comprehensive strategy to get the

results they desire. A strategy that does not engage the people closest to wealth-generating mechanisms, without gaining their understanding and buy-in, can be a prescription for disaster.

Many of our country's decisions (laws and regulations) are made for political gain, often based on speculation rather than comprehensive fact-based prescriptions for our nation's interest. Preparation for a "college education" is not the only answer for American competitiveness. Measuring student's progress through testing is not solely a function of teaching and curriculum effectiveness; parent and family values play a key role too. That's a fundamental part of the learning process.

I want America back! We need to take America back from the disconnected decision-makers, policy makers, and self-serving politicians who are not looking out for our future life style, our nation's competitiveness. I want school teachers, counselors, and administrators to listen and respond to the needs of the communities they serve, not the politicians holding the purse strings. I want fair and balanced "career education" provided to school students beginning in the sixth grade. I want parents to realize that their future lifestyles, healthcare, and social security depend on the abilities of their children as meaningful and productive members of our society. I want Johnny and Sally to learn that a vocational program can lead to secure and rewarding careers and that a one- or two-year post secondary vocational-technical is "college" too. I want employers to spend time with their local schools and boards of education to let them know what is required to be employed in their businesses. I want employers to offer field trips and tours of their workplaces not only to students but also to teachers, counselors and administrators.

I want America to continue to be the most productive nation in the world with a lifestyle that commands respect. But that's me. That's what I want. What do you want and what are you willing to do about it?

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