



IMTS 98

Making use of what's at IMTS 98

It's another IMTS and everywhere one looks will be the latest in metalworking technology. Much of what one will see is more sophisticated than what was shown two years ago. Today, there's more computer power driving precision part making, more science than art, and more artificial intelligence in machine controls than human intelligence at the controls.

Herein lies a dilemma we cannot ignore: as good as business has been for metalworking the past several years (and pundits predict a continued roll), the shadow of a very real problem—one predicted more than two decades ago—looms larger than ever: an atrophy of the ranks of skilled workers.

From Los Angeles to Pittsburgh, from Wichita to Chicago to St Louis, want ads calling for 'skilled machinists,' 'experienced machine operators,' 'journeyman tool and die makers' go unanswered. This shortfall of a skilled, literate, and competent workforce is beginning to hobble plants large and small. The small shop cannot invest in new technology to diversify and to grow because it cannot attract needed technologically literate workers to fully capitalize an investment, and it cannot afford to set up an in-house training program—only to possibly lose those few it might train.

Large, well established nameplates fare no better. IBM's annual training costs run \$1.5 billion, greater than the entire annual budget for Harvard University. The alternative, not spending the billions on training, IBM says, would prove more costly yet. Motorola estimates more than half its factory workers need remedial education just to attain seventh-grade math and English skills. It's estimated that 23 million Americans are functionally illiterate, meaning their reading and math skills are very low to nonexistent. Up to 65% of the workforce is intermediately literate—meaning this group can read at between the fifth and ninth grade levels—this, when most workplace materials, technical manuals, and such are targeted at the 12th grade level or higher.

The future doesn't look much better. It's estimated that in addition to the 700,000 students who, despite twelve years of formal US education, have such poor reading skills that they cannot digest a newspaper or fill out a job application, an identical

number drop out of school entirely, forfeiting any chance of becoming literate on any level. Further, nearly half of American 17-year-olds cannot perform simple math calculations normally learned in junior high school, and that the current crop of high school graduates is so ill-equipped that US industry will spend \$25 billion a year for remedial training programs for new employees on whom state, local, and federal agencies have already spent \$130 billion, trying, largely in vain, to teach the basics. And in this age of international and global competition—a single example should cause alarm: less than 0.02% of US students have studied three years of Japanese, while 100% of Japanese high school graduates have studied at least six years of English. (The figures for languages spoken by other US competitors—German, Spanish, Portuguese, Chinese—are no better).

What's to be done? We can't sit back and let someone else handle it—especially if that someone else is the federal government. The government's solution is to simply throw more tax dollars at an educational bureaucracy that hasn't changed its approach to educating young people since it was established (when the gross domestic product was primarily agricultural). To thrust the issue at technical and vocational schools might seem logical but wouldn't be fair. They're entering the game far too late, with often inadequate market information and outdated equipment with which to train tomorrow's workers today.

This is a problem we, in industry, must resolve ourselves. At Hydromat, we've taken steps to preserve a European-style, 8000-hour apprenticeship program and have recently endowed a Hydromat Educational Foundation at \$150,000 annually to fund seats at local trade and technical colleges for qualified but financially disadvantaged students who wish to pursue careers in metalworking.

In the end, the reality of truly global competition is that technology, quality, price, delivery, and service—all these will be givens. Without them, a company won't be competitive. The differentiator, then, becomes a company's resident depth of talent. To ensure this on a national level, we hope others, in the public and private sectors, will follow the lead we and others are taking.



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Rotary Transfer
Also: Gearmaking/Broaching/
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