



Training and Technology: Time, Money, Quality

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When I was a student, I really liked when an equation just made sense. One such example is Ohm's law: $I = V/R$ (Current equals Volts divided by Resistance). If I knew any of the two, I could tease out the third.

As Director of Industry Research at PMPA, I have had quite a bit to do with benchmarking, financial reporting, tracking business trends, forecasting and the like. It occurred to me that I would like to have a tidy equation—just like Ohm's law—to explain how the world of precision machining works.

I don't have the algebra fully developed...yet. But I think I am on the right track thanks to a piece I read in the latest *World of Tools Magazine*, published by PMPA technical member, pHorn. The article described the advantages of combination tools (needing fewer tools on the machine, shorter cycle times, less inspection time and higher process reliability). However, it was the title of the piece, "Technology Determines Time" that nucleated my thinking.

Technology determines time. Time equals money. Money is to be minimized in expenditure; maximized in income. *Vive la différence*. But that's not all. Training increases your *Tech-knowledgey*. Tech-knowledgey equals technology. Technology equals money. Do you see where I am going with this?

What about quality? From my experience, both training and technology have the power to improve

quality and the power to reduce costs. These are the drivers to improve your bottom line, which is where you get the final judgment regarding your enterprise's money.

Technology can reduce time (shop expense), earning you greater monetary rewards from your



contract. Training can similarly reduce time (shop expense), earning you greater monetary rewards from your contract.

Technology + Training = Reduced Costs + Improved Quality. Improved Quality = Happy Customers. Reduced costs + Happy Customers = More Money (in the form of future orders to you, your customers' preferred supplier).

Technology can make you money. Training can make you money. Both result in improved quality, which can make you money (as well as keep you in

business). Together, technology and training can lead to breathtaking improvements in capability and quality, with these leading to more substantial profits.

I don't have the equations fully developed yet. But I can say this: "Technology plus training equals continuous improvement."

Continuous improvement, not just in your deliverables, but in your receivables, as well.

Want to improve your profits? You can continue to try to reduce costs (not that you have a lot of waste surviving in your shop these days). Or, you can invest in technology...or training.

As I see it—and as the folks at pHorn pointed out—technology determines time; training determines time; both determine quality. Reduced time and improved quality equal improved profits. I may not have the equations just yet. But I think I have this figured out.