

# PERT... for a better way to teach

 By [Peter Horszowski](#), issued by [Pert Industrials](#)

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2017 marks PERT's 50th year in technical education and training. When I was a young teenager, I actually asked my dad: "What is the difference between education and training?" He answered without hesitation: "Put it this way, would you rather have sex education or sex training?" (Of course this explains why we at PERT value practical work so highly!) But jokes aside, I hope that you can see how good this reply is. It immediately and memorably gets a concept across. At the same time, you realise you pretty much understood the thing anyway, and that you just needed a little guidance and prompting. That is good teaching. In fact, it is PERT's byline: For a better way to teach.

I hope my dad won't mind if I share a few of his more memorable explanations, which may convey the spirit behind PERT's work.

1. *Newton's Third Law* - Isaac Newton's famous principle that for every action there is an equal and opposite reaction seems reasonably simple, but it can get quite confusing in application. So I often think back to my dad's example of the hand shower. "When you put the water on, the shower head goes backwards. Do you think it makes any difference to the shower head whether you put your hand out to deflect the spray or not?" You should try it yourself. It is a great way to understand the subtleties of the principle.
2. *The Economy of Value* – When I was still quite small I remember asking my dad why the government didn't just print some more cash and give it to everyone. My dad's reply: "Well, imagine if you got a million rand and then went off to buy a car or something. But now everyone else also has an extra million – what do you think would happen to the price of the car?" I was probably around ten years old but I immediately understood that value, not money, was the real currency in an economy and that money without value will just inflate prices. It is a fundamental concept which a lot of people (even economists!) don't always grasp.
3. *Available Energy* – It always bothered me that a 12V battery could turn over a motor car engine. Voltage wise, that is like a couple of cell phone batteries! But my dad asked me to think about these things in terms of available energy and the actual work done over time. "Think of a match," he said, "Sure it burns at hundreds of degrees. But could it heat a bucket of water?"



I may have learned more from my dad's approach to the problems than from the explanations themselves. I hope that these few examples convey that. You can always just rattle off formulas and facts. But good teaching opens up an idea and gives you the tools to discover things for yourself. It is inspiring and empowering. This is still what we hope to provide at PERT: a *better way to teach*.

## ABOUT PETER HORSZOWSKI

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