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Scared by Six Sigma?

Don't be...

Recently I assisted with a Robust Design for Analysts training course run by Bourton Group at one of the UK's leading manufacturing companies.

It was a useful reminder of Process Improvement's vast scale of complexity.

I spend most of my working life training, coaching and leading projects at companies which have massive amounts to gain from the application of improvement techniques. Some of the less complex techniques include:

1. Brainstorming
2. Root cause analysis
3. 5S
4. Process mapping
5. Waste identification

Increasing in complexity, I also equip people to make judgements based on measured data for example using Pareto charts.

I swear by these techniques, because time and again I have seen companies use them to make gains which they never even realised were possible in the key areas which their customers care most about.

Notwithstanding the huge improvements companies can make from their application though, they are all at the simpler end of the complexity scale and typically all covered by Yellow Belt or Green Belt training. The people attending training courses to learn these techniques do need certain qualities though.

They should be comfortable facilitating groups and be in a role which will enable them to apply the tools. Although, these tools may not be instinctive, and do need to be learnt; delegates are unlikely to have difficulty taking them on board.

What if, though, you are in a role which would benefit from the application of more complex, technical techniques, but you do not have experience or knowledge of statistics?

This can be an uncomfortable position in which to find yourself.

An attendee on the five-day Robust Design for Analysts training course approached me during a break on day two with exactly that conundrum.

We had been covering Hypothesis Testing, described in the training material as a method 'to enable the drawing of objective conclusions about population parameters from corresponding statistics derived from sample data, with due consideration of risk'.

He said, "when I go on training courses, I'm used to understanding the material and making good use of it afterwards, but even though I know I need to use this in my job, somehow it's just not going in".

It's a problem I could relate to.

I first came to Continuous Improvement theory when the company I worked for was beginning to implement Lean. We had some successes (and the odd failure!) applying Lean techniques to processes from gas plants to customer service teams, and before I knew it my role was greatly in demand and I was working on projects across Europe and beyond.

Then came a change of thinking in Management – if we can gain this much from Lean alone, what if we take it further and it becomes Lean Six Sigma?

Despite having happily left mathematics behind when I left school aged 16, my success in Lean process change meant I suddenly found myself facing five weeks of heavily statistical Black Belt training.

Overnight I went from being confident and comfortable with a job which I genuinely enjoyed, to feeling distinctly out of my depth.

I saw the exact same fear in the Robust Design training attendee and started to think about what my strategy had been for getting through this significant career dilemma.

Essentially, I did three things, and recommended all three to him:

1. Practise!
2. Receive coaching
3. Know your limits

Practise

ix Sigma training consists of a repeated cycle of learning what a technique is for; learning how to use it, applying it to a set of data and discussing the results.

Five weeks of training sounds like an awful lot, but this cycle can happen four or five times per day.

For anyone with an academic background in maths or statistics this will be fine, everyone else simply needs to practise. If it doesn't sink in during the class, repetition really does help.

Practise with data, any data on anything you're interested in – are your favourite football team's results in statistical control? Or your favourite band's chart positions?

Practise in your head too. You can ask yourself what the null hypothesis is for any decision you take, it's surprising how quickly you go from feeling like you'll never get it to being comfortable with the concept.

Receive Coaching

Training is necessary for learning about the existence of statistical techniques, but for increasing your confidence in their application you cannot beat working on your own project with a Master Black Belt sitting alongside you.

Take every possible opportunity for coaching from the people within your organisation who know this stuff best, schedule it on a regular basis if possible.

If your projects are not in a position where you feel like you need help, go back to the training material and come up with some questions about anything you didn't feel like you understood at the time.

This is as much about increasing your confidence and ability as impacting your projects.

Know your limits

The key thing to recognise about the training is that as long as you learn that the techniques exist and why, you don't need to remember how to use them.

The training is not a memory test!

When you're back in your role and you see an opportunity to benefit from Design of Experiments / Statistical Modelling / Regression Analysis, you can go back to the course material to remind yourself how to do it.

You will never know all this stuff off by heart, there are people who do but don't beat yourself up for not being one of them. You got your job because you're the most suitable person to do it.

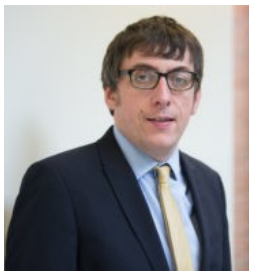
By taking on board Lean Six Sigma theory as the role demanded it you will be commended for being adaptable, no one is going to criticise you for not being able to explain Fractional Factorial Designs off the top of your head.

For Green Belt and Black Belt certification you will need to pass a test, but these are usually open book – know the layout of your course material well and you'll be fine.

Conclusion

Fear at the prospect of needing to apply statistical techniques as part of your job is perfectly normal. It might not be helped by people on your course who seem to take it all in their stride, but don't feel intimidated! Left brain / right brain theory actually highlights a flaw in the role of Lean Six Sigma belt, they're expected to be methodical and analytical (left -brained) in their thinking, but they also need to be imaginative and intuitive (right-brained) when designing new processes and influencing teams. It's great to be described as a "good all-rounder", but what that means in practise is that you're well equipped to have a go, not that you're equally good at everything.

While you might be terrified of interpreting Design of Experiments, those people on your course who couldn't get enough of it will be equally worried about engaging stakeholders or effectively facilitating workshops, the things you take for granted. As the organisation you work for is prepared to invest in training you, they should also be prepared to offer the necessary support afterwards. Make good use of that support and before long you'll have increased your personal capability and your value to your employer in areas you never previously even considered.



Mike joined Bourton Group following on from a successful career in performance improvement.

Mike is a certified Lean Six Sigma Black Belt with nine years' experience of leading hard benefit generating projects, across multiple functions of a large organisation. He has delivered numerous Continuous Improvement programmes, and coached at all stages

If you have a question about Lean Sigma Training, or if you're looking for support with another situation, feel free to get in touch on 01926 633333 alternatively you can email us at info@bourton.co.uk.