

Six Sigma's Misunderstood Method

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If, like many, your Six Sigma program is struggling, or not providing the business “wow factor” that it promised, read below for the critical part of the Six Sigma methodology that was not explained to many of us.

Once upon a recent time, phones rang off the hook at the desks of Six Sigma consultants. If one had a Black Belt or Master Black Belt he or she could demand top dollar and benefits. More recently, colleagues with belts were hard hit by the recession as businesses made hard decisions to reduce those who enabled or facilitated better work rather than reduce those who did the work.

At the time of this writing there is a mixed bag of responses to the phrase “Six Sigma.” It seems as if for every business that decides to incorporate the philosophy or methodology a different business abandons it. Why is it that a methodology that rocketed Motorola from barely mediocre to world class and has been boasted by the likes of Allied Signal, GE, and Honeywell now has as many naysayers as promoters? The answer is that failures have caught up with success.

For every tale of astounding business turnaround there is now a nightmarish horror story. For every successful venture there seems to be a failed launch or a failed program. Even the current leadership of Motorola, where the whole philosophy started, won't lay claim to continuing the methodology.

Is Six Sigma done? I don't really think so. Should it be? I shrug my shoulders. I've witnessed the good and the poor, the great and the ugly. I can say, however, that I believe that I understand why the failures have occurred, and what, in simple terms, distinguishes the successful from the failed. Let me explain what I can in hopes that my observations might help you re-enforce, bolster, or turn around your own program if it needs help.

I believe that most of us never received a clear explanation of how Six Sigma works, and therefore, how it succeeds. Even after months of training, many of us struggle to quickly and concisely explain how Six Sigma makes business better.

I believe that the crucial information that determines the success of the Six Sigma approach that was never explained, or at least not explained in a way that we understood or that adequately got our attention, is as follows.

- Six Sigma saves money by reducing and controlling variation
- Six Sigma is a decision-making methodology

If you are a champion or experienced swimmer in the ways of Six Sigma, then you might reject my first bullet. Variation is all over the Six Sigma training and language. How can I say that most of us didn't get the message? To that I say, “Well, think about it. Did you really get a good explanation of *why* reducing variation saves money, or were you simply told to believe it?”

Let's replay how many of us typically get Six Sigma explained to us. There's usually an elevator speech to get the conversation started that explains that the term “Six Sigma” refers to an ideal state in which only 3 parts of every million are defective. Imagine the quality and customer satisfaction and the savings if only 3 products in every million we deliver are defective.

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Once that suggestion gets our attention, there is usually a consequential explanation that "Sigma" is a mathematical symbol or representation of standard deviation, which is a measurement of the variation of a given process. The goal is to improve the process to the point where six of these standard deviations fit within the limits or the window of the specified performance or tolerance.

The conversation goes on to explain that a problem solving approach is included in the methodology to aid in process improvement. It typically takes the form of a stepped process defined as Define-Measure-Analyze-Improve-Control (DMAIC). In addition to a problem-solving process is a toolbox, mostly filled with root-cause analysis tools and statistical tools to both measure and understand process variation and control it, and to aid in rooting out the causes of variation.

Of course there are numerous success stories and examples thrown in by way of both selling and explaining the methodology. Does that sound like a fair synopsis of how Six Sigma is often explained?

Now, I admit that variation is discussed. But, in any of the discussions that you have ever had, did anyone sit you down and really explain that the enemy of Six Sigma is variation; that as a soldier of the Six Sigma army your mission is to seek out and destroy variation in all its forms, wherever you can find it? If someone did, you got better training than most. Now, here's the kicker. Did your management staff and executive leadership get that message? Did anyone explain *why* variation is the enemy?

The fundamental assumption of the Six Sigma philosophy is that variation is the root of all evil. Evil manifests in the form of people doing unnecessary work to correct or control things that come out differently every time they encounter it. Evil manifests in the form of materials and products that change their behavior or experience poor quality because each and every one is different than the one before, or from those the month before.

Businesses lose money or waste time and resources trying to control or manage processes and phenomenon that behave differently from event to event, or time to time. This is a very sound principle. It works for every form of business or personal endeavor, it is timeless, and it is basic. For this reason, Six Sigma is a solid idea. By minimizing variation, we can minimize wasted resources, time, and money.

The problem is, that in all of the sales pitches, long explanations of the methodological approach, and months of training, this fundamental principle seems to get buried, neglected, overlooked, or poorly explained. I've worked with numerous people in Six Sigma organizations that never really understood why all the discussion of variation was important. At best, they were told that variation is bad, and they played along, but when push came to shove and long-term decisions needed to be made, the goal of investing in lesser variation lost to short-term costs.

This makes a good launch point into discussing my second bullet. Ultimately, at a fundamental level, all of the Six Sigma tools, problem-solving methods, and language around variation serve a single, fundamental purpose. It gives us the ability to make informed, data-driven decisions. *It is a decision-making methodology.*

This is critically important, like wheels on a car critically important, yet in my many years as a Six Sigma specialist, I've never heard anyone say it. This lack of insight is also, I believe, a root cause for failed Six Sigma programs.

Play along with me. We've established that the enemy of Six Sigma is variation. Well, to truly identify, map, quantify, and understand variation, we need a solid understanding of statistics and statistical tools. Unfortunately, most of us entered our professions with little or no statistical background. Therefore, a great deal of intense training and education is required.

Many businesses look at the intensity of the training, and the consequential investment and start seeking a pragmatic and affordable way to introduce the methodology. This often leads to select members getting the training, and the rest of the business receiving an introductory, crash course that focuses more on the language or dictionary of Six Sigma than on understanding how it works or saves money. (When I say, "how it works," I don't mean DMAIC, I mean how variation wastes money and how the statistics will make decision-makers wiser)

As a result, only a very few people in the business may truly understand. Now those few people must constantly negotiate with everyone else, who may or may not understand, for data, information, permission to

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alter processes, and resources for experiments. It's tiring. Believe me. Worse, these specialists will spend hours trying to figure out how to explain what they observe to a manager or executive so that leader can make an informed decision. Most times they must explain what took them months to learn, and days to solve, in 30-seconds or less or they lose the leader's attention.

Now, I ask you, does any of that sound familiar? Now, imagine the alternative. The leader/decision-maker asks an aid to run a specific study and draft the charts and results because that leader wants to see the variation of a specific process. Better, yet, the leader does the work. Then, with all of the process improvement and statistical skills, and understanding what variation costs, that person makes an informed decision.

Suppose the leader wants to make a change to the process. He or she shows the analysis and results to the process owners and participants, and because they too understand the analysis and the importance, they collaborate on how to best improve the process and it is immediately executed.

Which scenario, do you suppose, works best to drastically improve business performance? It seems obvious when we put it in these terms. The second scenario, of course works best, and it is what we observe in those organizations that have truly incorporated Six Sigma and will swear by its effectiveness.

Here's the difference. When we get a select few people educated and put them to task trying to improve processes, we missed the point. Those few people are the only people in the business who truly understand how to use the statistical data and understanding of variation to make better decisions. Unless you are going to dictate that everyone must do what this elite team says, they must fight with everyone in the business to accomplish their mission. It is a recipe for failure.

However, when the decision-makers understand why variation is important, they can actually assess how much it costs and make smart, forward-thinking decisions. Six Sigma works best when all of the decision-makers in the business have the tools and understanding to use the Six Sigma method. Yes, accomplishing this is difficult, time-consuming, and it requires a major cultural overhaul. It is unpleasant, and this is why it is often not accomplished.

It's easy to say that Six Sigma is just too difficult, and that is why it fails. I think that to say such, is neither accurate, nor insightful. Yes, the mastery of statistical tools requires a great investment in training, but businesses train people in skills and tools all the time. I believe the failure occurs when the *right* people are not given the skills and tools necessary to follow the Six Sigma philosophy.

Take a look at your own Six Sigma program. Do your decision-makers understand why variation is bad? Are they capable of assessing how bad? Do they have the skills and tools to quantify the variation and communicate what should be done to make more money or save money? If the answer is "no" to any of these, you now have a mission which, if accomplished, will turn your Six Sigma program from doubtful to distinguished. Change the answers to "yes."

The DMAIC problem-solving approach and the suite of critical-thinking and statistical tools are not the magic that makes Six Sigma work, though they are often the focus. The magic is in the principle that variation is a cause of lost profits, and in ensuring that your decision-makers have the skills and understanding to act according to that principle.

Improve your Six Sigma program by reflecting on how well your decision-makers understand and how skilled they are at assessing and managing variation. Don't let the complexity and intensity of the statistical skills deter your organization from enabling your decision-makers to be wiser.

Six Sigma can make, and has made, a huge difference for many organizations, big and small. Don't become one of the failure examples. Instead, consider the observations above and enable your program to be one of the great successes.

Stay wise, friends.

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