

A Look Back on Six Sigma

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Six Sigma, currently purported as the magic button for solving most of the corporate ills, was started as a quality program in Motorola. Over the time it had had some good and bad days, till Jack Welch, then chairman of GE decided to make it a corporate initiative in 1995. Who does not want to follow GE! A significant amount of corporations since then have adapted Six Sigma. Some admitted success and some struggled with it.

Whether Six Sigma really helped or not is a question of whom you talk to. It certainly spawned a very strong job growth. Just the iSixSigma website lists about 100 consultants which certainly is not a complete list. However, majority of the job growth happened within the organizations. There is a whole chain of Six Sigma professionals in the companies ranging from Vice President to Black Belt. While I would not go into the details of the numbers, but think of this that one of the ten billion dollars business that I worked with had over 20 MBBs and over 200 BBs. (MBB and BB are Six Sigma professionals chartered to lead improvement projects). Looking at just the size of US economy, you can scale the above number to provide you with a reasonable estimate of the job creation due to Six Sigma. As for as the financial benefits due to Six Sigma are concerned, annual reports generally overstate it significantly. You can swing a business case by large margin. That speaks of the credibility and the robustness of business case development as well as the Six Sigma financial benefits.

Six Sigma certainly did a lot of good for the companies. I personally think that the biggest benefit has been that it drove numerical discussions, albeit upon time to a degree of fault. It also created benchmarking of the processes and hence educated people around on the execution methods of tasks and standardization of the methods. Six Sigma brought in statistics into design and operations. In earlier times, we did not have enough knowledge of the cause and effect relationships. Most of the work went on to develop these nominal relationships. It was a natural progression to start looking into the variances of inputs and processes, and hence the outputs into the decision-makings. Six Sigma brought these variabilities into decision-making. This helped reduce the large factors of safety that were being introduced due to the lack of clear knowledge. Make no mistake that still a majority of the companies including those in high technology arenas use nominal information in conjunction with factor of safety. But there is no doubt that Six Sigma has created the discussion around statistical decision making. Reduction in margins has direct impact on saving of material, time, and productivity.

I once had an opportunity to analyze product non-conformance for a multibillion-dollar business. It was amazing to see the chronological distribution did not show much change over 10 years period of analysis. This is while all believed that things have gotten better over time. Was this understanding created because of my knowledge of Six Sigma or just

my curiosity to look into the root cause? It is debatable. I, however, would definitely suggest that it has to do with logical decision-making. I do not think that anyone had looked at long-term trend before this. By the way, I had used control charts to create non-conformance groupings as well as convince the executive leadership of need to do things differently as nothing has improved over these years.

Six Sigma is also closing gap of the problem solving methodologies that academic institutions have not been able to impart during the educational periods. When I talk to my 8 years old, she can solve most of the problems. Her challenge comes when you ask her to explain how she did it. I have seen in textbooks they encourage problem-solving methods even at third grade level. So, it is quite interesting that even after college degrees, we have to teach people on problem solving methods, on Six Sigma. In my experience of over 15 years, I have seen this need for educating associates in structured problem solving in corporate as well as in the university classrooms.

So with all these positives, where are the challenges, if there are any? Are the corporate metrics really saying what they should be? I use to ask the consultants when I was not one, “if I give you the best people to work on a topic, they are going to solve problems with or without Six Sigma; then where is the benefit of Six Sigma”. More often than not, the benefits being reported are not due to Six Sigma but are due to the high-class workforce assigned to it. A true benefit of Six Sigma would be credible if you create a trend of employee contribution in per capita revenue or profit generation as a function of skill/capability level. Comparing that curve of per capita revenue distribution before and after Six Sigma implementation will be a better validation of the value of Six Sigma. In fact the variability in the Six Sigma performance from company to company as well as from group to group is based upon whether the best joined the Six Sigma program or not, whether the coaching and mentoring was provided properly or not.

The coaching and mentoring, and in fact to some extent even teaching has been less than phenomenal. I recall once a consultant from one of the well-respected consulting company told me that he had years of Design for Six Sigma experience including with GE. When I started pressing for the type of work, he finally admitted that his total experience was facilitation of a QFD session. More often than not, these are the type of people who are leading the training and coaching efforts. No wonder, the success of Six Sigma has been mixed. In another case, they tried to convince me the value of DFSS. I asked them how many products they have designed. Answer was obviously none. I offered them that I will give them contract if they can guarantee what they are selling as benefit. Well! They never even quoted after that. My thinking was if you were so good and so confident, why would you not commit contractually.

We have the blinds leading the blinds. Six Sigma from becoming a business transformation tool got into hands of too many of those who had and have little understanding of its values. The initiative got hijacked. We are giving people on the name of Black Belt power to make changes while their capability on leadership as well as process/technology is novice. The trouble is that they have neither capability nor proper

mentorship to bring the capability. These blackbelts and master blackbelts are caught in a touch spot. They are being told that they are the best and later only to find out that their capabilities do not go much more beyond the ability to process map. But for that, you can hire few high school students. In their case, the famous adage “you do not know what you do not know” applies. Certifications are not about Six Sigma; they are more geared towards the knowledge of industrial engineering and statistics.

I am wondering if universities should create a curriculum more comprehensive for the program. Something more than certification! If Six Sigma has so wide application, it definitely deserves to be brought to the mainstream curriculum.

Bottom line, Six Sigma is and has been a good thing for people, for businesses, and for the economy. We, however, need to focus on the right set of deployment, having the right people, and doing the right way – getting back to basics. Six Sigma was made successful by GE and not the other way around. GE has the capability to extract the best out of anything and move on. Question is whether you want to become like GE!