Who applies Six Sigma?

I am a certified Six Sigma Master Black Belt. When I introduce myself using that description, I occasionally get some strange looks. I even had one person question why I was using a martial arts title in a business setting. Admittedly, the use of belt terms can be confusing to those who are not familiar with Six Sigma, and I usually have to take a moment and describe what they mean.

In martial arts, the various belt colors indicate how much knowledge and experience the practitioner has gained in their chosen style. The belts in Six Sigma work the same way. They simply indicate how much training, and to some extent experience, the practitioner has obtained. Dr. Mikel Harry devised the idea of using belts to describe Six Sigma practitioners while he was working with Unisys Corporation in 1987. They needed a way to describe the staff that had been trained in Six Sigma, and who had developed a powerful new set of skills. Over time, these belt terms have become industry recognized job titles, so it is not unusual to see an organization posting jobs specifically for Six Sigma belts.

In Six Sigma, you will most commonly encounter White, Green, Black, and Master Black Belts. At times, you might find the term White Belt replaced with Yellow or see someone with a Brown Belt, but white, green and black are the most common.

In the following sections, I will provide a general overview of each belt level and how much money each can be expected to return to the organization’s bottom line. The figures quoted are guidelines only. Training time will vary depending on the certifying organization. The percentage of time spent on projects and the number completed each year will vary based on the business unit and how they choose to employ their staff resources. Finally, the dollars returned per project will vary based on the skills and experience of the practitioner and their work environment (type of organization, volume of work in a given process, service vs. manufacturing, internal department vs. customer-facing department, etc.).

White belts

The focus of a White Belt is to make improvements to tasks and processes that are within their direct job role and span of control. They do this through the application of their job knowledge, problem-solving skills, and the application of basic Six Sigma tools. White Belts support and serve as subject matter experts on Green and Black Belt projects.
Green belts
While White Belts focus on a specific task or process within their job functions, Green Belts look at making improvements to substantial portions of, or entire processes within a department. Green Belts receive more in-depth training in the Six Sigma DMAIC methodology, improvement methods and tools, and basic statistical analysis skills.

- Classroom Training: 80 hours of classroom training, and must complete a project for certification
- Time Spent On Projects: 20% - 50%
- Projects Completed Per Year: 2 - 4
- Dollars Returned Per Project: Approximately $50,000 to $75,000

Black Belts and Master Black Belts
Black Belts have the greatest amount of knowledge about Six Sigma and are the workhorses of the Six Sigma world. They tend to be analytical problem solvers and work full time on projects, each of which can take several months to complete. Black Belts are experts in the DMAIC methodology, lead teams to complete projects, and provide coaching to Green and White Belts. They focus on improving cross-functional or very complex processes and apply advanced statistical analysis, design of experiments, diagnostic methods, and Design For Six Sigma (DFSS) tools to their work.

Master Black Belts are experienced Black Belts, who provide leadership within Six Sigma organizations. They are frequently assigned to particular business units or product areas, and work closely with process owners to ensure that operations run at optimal levels, and performance goals are achieved. They are called upon to lead complex projects, coach all levels of belts, and train Six Sigma practitioners. Master Black Belts work with Champions and business runners to select Six Sigma projects.

- Classroom Training: 160 hours for Black Belts and 200+ hours for Master Black Belts. Must complete one or more projects for certification
- Time Spent On Projects: approximately 100%
- Projects Completed Per Year: 4+
• Dollars Returned Per Project: Approximately $100,000 to $250,000

**Champions**
Along with the various belt levels, you will hear the term ‘Champion’ used in Six Sigma. Champions do not necessarily have a belt, but they play a critical leadership role in Six Sigma efforts. It is their job to introduce, build support for, and deploy Six Sigma. They also develop strategic plans for and monitor the success of the initiative, and ensure that all projects align with these plans. They serve as advocates for the project teams and help to remove any barriers they encounter. As Six Sigma initiatives roll-out, they may face substantial resistance to change from within the organization. The Champion needs to be tenacious in order to overcome this resistance and help the various Belts move their projects forward.

**Six sigma project organizational structure**
There are many ways to organize a Six Sigma team, and there is no single right way to do it. However, one common organizational structure has Black Belts leading projects, assisted by one or more Green or White Belts. The Green and White Belts are assigned to teams based on their expertise or knowledge of the process being improved, and take responsibility for small portions of the project.

There are times when it is preferable to have a Green or White Belt lead a project rather than assign it to a Black Belt. This may be due to a limited project scope or the project not requiring a Black Belt’s level of expertise. When this is the case, a Black Belt acts in an advisory role to the project team.

**Summary**
In order to achieve breakthrough change in an organization, you need a skilled and knowledgeable group of people working together to make it happen. In Six Sigma, Champions lead these efforts, assisted by a dedicated group of Black, Green, and White Belts all focused on making positive changes. By combining their efforts, the overall impact of these groups can give an organization a very competitive edge, dramatically reduce operating costs, and increase efficiency and the quality of services and products for customers.

I welcome your questions and feedback about this topic or any other service operations or process improvement topic. You can email me at clayton.taylor@asu.edu.
About the author:

Clayton Taylor, MBA, is the Director, Organizational Performance and a Certified Six Sigma Master Black Belt working in the Office of the Executive Vice President, Treasurer and Chief Financial Officer at Arizona State University. He leads the Organizational Performance Office. He and his team currently consult with diverse Business and Finance and university-wide operational areas to lower costs, improve operational efficiency and provide the highest quality customer experience to internal and external customers. Mr. Taylor can be reached at clayton.taylor@asu.edu.