The Five Fundamental Principles of Six Sigma

Hearing that your customers are not happy, or looking at your services and trying to figure out how to make them better can be a daunting assignment. However, by stepping through some fundamental principles of Six Sigma, the path to identifying opportunities for improvement and what needs to be done to make those improvements, becomes much easier. One of the founders of Six Sigma, Dr. Mikel Harry, outlined the following principles:

- We don’t know what we don’t know
- We can’t do what we don’t know
- We won’t know until we measure
- We won’t measure what we don’t value
- We don’t value what we don’t measure

These principles are simple. They are common sense logic. And, unfortunately, in my experience, they are very frequently overlooked. Over the next few articles I am going to take a look at each of these principles, and discuss how to apply them to your organization.

What happens when we don’t know what we don’t know

What made me want to discuss these principles was a lunchtime conversation I heard between several business people who were trying to develop a solution to a problem with customer satisfaction. They knew their organization’s customers were dissatisfied with the services they were receiving and wanted to make improvements. As the group brainstormed, it became clear that the ideas they were putting forward would not have the effect they desired. The reason is simple:

They failed to identify and understand the specific problems (plural), the root causes of those problems, and the magnitude of each issue, before jumping to finding solutions.

The result of this is that the group was developing solutions for a problem (singular) which they did not fully understand. The ideas they came up with would only make cosmetic changes to the services they provided (smile more, be friendly, thank the customer for coming in, etc.), provide very general customer service training to their staff, and increase the marketing of their services to customers in an effort to convince them that service was great.

Here is a red flag - at no time did anyone at their table mention the customer, customer expectations, or customer feedback. They referred to their customers’ dissatisfaction, but nobody mentioned specific issues that could be the cause of it. Without having clearly identified unit-specific issues, all they were able to do was put forward high-level solutions and organization-wide approaches in an attempt to address every possible situation, but not really ending up fixing anything in particular. This group did not know the details of the customers’ issues, and they certainly did not know the root causes or have any measurements to define the performance gap. The result was that their solutions were superficial and targeted at fixing the symptoms of the problem, not the problem itself.

**We don’t know what we don’t know**

This principle essentially says that when making improvements to your services, you need to spend reasonable time and effort examining what customers expect and need from you, and while doing so, look at your processes to make sure that they are meeting those customer needs. This takes time and you cannot cut corners here. If you do not take the time up-front to do this, you run the risk of putting time and resources into efforts that will not solve the problem or could make the existing situation worse, and potentially force you to go back and perform rework to get things right.

One cannot just make assumptions about what the customer wants. I have worked with a variety of industries throughout my career, and I have encountered organizations where operational decisions are based on people’s past experience or what they believe the customer wants from the organization. Experience is a valuable part of decision making, but you can’t forget that it is based on things that happened in the past. Customer needs and expectations change over time. Just because customers expected to be treated a certain way in the past does not mean that they will want that same type or level of service now. Experience has to be balanced with current feedback from customers.

When making decisions about how to improve services, you cannot guess. If there is a performance gap then it must be clearly identified, measured and understood so that it can be closed or at least considerably reduced. Otherwise, your customers are never going to be happy with the services or results you provide.

**Finding the answers to what we don’t know**

There are a number of ways to find what the customers’ expectations and needs are. Collecting Voice Of Customer (VOC) data is absolutely essential in understanding your customer and ensuring your services appeal to and meet the needs of your customers. Putting in the time and effort to gather VOC will give you a thorough understanding of:

- The stated and unstated needs and wants of your customers
- The services and service features your customers do and do not like
• How customers use your services
• Where opportunities lie to make improvements to existing services or provide new services

There are a wide variety of methods that can be employed to collect feedback. Each method has a number of variants, so it is very likely that you will be able to find one or more ways to collect the information you need, and do it within your budget and timeframe. Some methods you may want to consider are:

• Surveys
• Interviews
• Suggestion boxes
• Direct contact from customers
• Observation
• Customer advisory committees
• Focus groups
• Social media

There is no single best way to collect VOC feedback, and I recommend that you use more than one method to collect data. This will allow you to get feedback through a variety of diverse channels and compare the information between them to make sure you are getting consistent feedback. After the data has been collected you can spend time reviewing, analyzing, interpreting and communicating it. See the previous three-part article titled Hearing the Voice of the Customer for more information on methods for collecting and analyzing voice of customer data.

Assessing organizational needs and processes
Just looking at your services from the customer side leaves you with an incomplete picture. You must also spend time and effort examining the organization’s needs and expectations to determine what value the service must provide. Additionally, time must be spent examining and understanding your processes to be sure that they are efficient, fast, and able to provide the required level of service. If there are gaps, then customers will not be satisfied with the services you are providing, the way they are being provided to them, or the results they receive.

Customers are not the only people who get to have a say in how a service is provided. An organization has expectations and needs for processes to provide a level of value from which it can benefit. Talking with the process owners and other stakeholders who are involved in producing and managing each specific service will provide a clear
picture of what the expected outcomes should be, what value comes from it, and what resources are available to make the service happen.

After gaining an understanding of the services from the stakeholders’ point of view, it is beneficial to map the process and begin measuring how well it performs. Process mapping gives us a graphical view of the process steps and how they interact with each other. When mapping a process, even a simple one, I often hear the process runners say that they did not realize how many steps they had to follow and how much effort was put into the services they provide. After the process is defined and mapped, it needs to be measured and performance gaps identified. I will discuss that when we get to the measurement principles.

Understanding what the customers’ expectations and needs are, and comparing them against organizational expectations and needs, as well as process capability will give you a clear picture of where performance gaps exist and how big the gaps are. This information will be critical in determining what steps must be taken to effectively close the gap.

In the next article, I will continue looking at the Five Principles of Six Sigma, starting with “We Can’t Do What We Don’t Know.” I welcome your questions or comments about this topic or any others related to service and process improvement. You can email me at clayton.taylor@asu.edu.

About the author:

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