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Homework #4 – Philosophies and Frameworks

TECH 50000 - Quality Standards

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## Chapter 3

### Review Questions

#### 5. Summarize Deming's 14 Points. How does each point relate to the four components of Profound Knowledge?

- 1. Create a Vision and Demonstrate Commitment** – An organization must define its values, mission, and vision of the future to provide long-term direction for its management and employees. To fulfill this purpose, it must take a long-term view; invest in innovation, training, and research; and take responsibility for providing jobs and improving the firm's competitive position. When management constantly demonstrates their commitment to this statement, they are demanding a well-articulated aim for the organization that is widely agreed and understood throughout the system, which in turn will promote cooperation and show appreciation for the system.
- 2. Learn the New Philosophy** – Companies must take a customer-driven approach based on mutual cooperation between labor and management and a never-ending cycle of improvement. To effectively focus on the customers' needs, everyone, from the boardroom to the stockroom, must learn the principles of quality and performance excellence. People and organizations need to continually renew themselves to learn new approaches and relearn many older ones. Just because today's system performance is acceptable, doesn't mean that it will be forever. As customer needs continually develop and advance, so will your competitors. Long-term survival is dependent on the new philosophy.
- 3. Understand Inspection** – Inspection should be used as an information gathering tool for improvement, not as a means of "assuring" quality or blaming workers. By understanding and seeking to reduce variation, managers can eliminate many sources of unnecessary inspection, thus reducing non-value-added costs associated with operations. If you think about it, there are two systems working instead of one, when a company depends on inspection. The first system is the one making defective products while the second system is working to protect customers from the insufficiencies of the first. Isn't it better to make sure that products are produced properly the first time?

- 4. Stop Making Decisions Purely on the Basis of Cost** – Direct costs associated with poor quality materials that arise during production or during warranty periods, as well as the loss of customer goodwill, can far exceed the costs of savings perceived by purchasing. Companies should establish long-term relationships with fewer suppliers, leading to loyalty and opportunities for mutual improvement. Constantly changing suppliers solely on the basis of price increases the variation in the material supplied to production because each supplier's process is different. Reduced supply base decreases the variation coming into the process, thus reducing scrap, rework, and the need for adjustment to accommodate this variation. Supply chain management focuses heavily on a system's view of the supply chain with the objective of minimizing total supply chain costs and developing stronger partnerships with suppliers. Suppliers are part of the system and should have the same aim of making the end-user happy. The most effective way to achieve this is for company and supplier to cooperate and work together to constantly improve processes. Also, both company and supplier must believe that the relationship between them will be mutually beneficial, which in turn, holds the promise of ongoing business.
- 5. Improve constantly and forever** – Improvements are necessary in both design and operations. Improved design of goods and services comes from understanding customer needs and continual market surveys and other sources of feedback and from understanding the manufacturing and service delivery process. Improvements in operations are achieved by reducing the causes and impacts of variation and engaging all employees to innovate and seek ways of doing their jobs more efficiently and effectively. Everyone benefits from the input of knowledge. People are more likely to enjoy their work, which in turn, will help the company prosper longer. Processes will become more predictable and operational definitions will be made more useful and consistent.
- 6. Institute Training** – Training results in improvements in quality and productivity, adds to worker morale, and demonstrates to workers that the company is dedicated to helping them and investing in their future. Training also reduces barriers between workers and supervisors, giving both more incentive to improve further. Training should include tools for diagnosing, analyzing, and solving quality problems and identifying improvement opportunities. Part of a system is the process of preparing the future of the system. Skills and knowledge are essential in keeping up with advancing customer needs.
- 7. Institute Leadership** – Supervision is simply overseeing and directing work. Leadership means providing guidance to help employees do their jobs better with less effort. Supervision should provide the link between management and the workforce. Good supervisors are coaches, helping workers to do a better job and develop their skills.

Leadership can help to eliminate the element of fear from the job and encourage teamwork. People like to work for leaders and managers who strive to engage the motivation of the people around them.

- 8. Drive Out Fear** – Fear is a cultural issue for all organizations. Creating a culture without fear is a slow process but can be destroyed in an instant with a transition of leadership and a change in corporate policies. Today’s managers need to continue to be sensitive to the impact that fear can have on their organizations. Two-way communication throughout organizations should be constantly encouraged.
- 9. Optimize the Efforts of Teams** – Teamwork helps to break down barriers between departments and individuals. Training and employee involvement are important means of removing such barriers. Workers in all areas and departments of an organization must work in teams to tackle problems that may be encountered with products or service.
- 10. Eliminate Exhortations** – Improvement occurs by understanding the nature of special and common causes of variation. Statistical thinking and training are the best routes to improving quality; not posters, slogans, and motivational programs calling for zero defects, etc. Motivation can be better achieved from trust and leadership than from slogans and goals. Most people at work want to do a good job but it is the system that is preventing them from doing so. Examples of how the system can defeat the best efforts of people include poor training and tools, inadequate information, and defective raw material.
- 11. Eliminate Numeric Quotas and Management by Objective (MBO)** – Goals are useful, but numeric goals set for others without incorporating a method to reach the goal generate frustration and resentment. Management must understand the system and continually try to improve it, rather than focus on short-term goals. Managers who understand variation will no longer set arbitrary goals.
- 12. Remove Barriers to Pride in Workmanship** – Performance appraisals are one of the biggest barriers to pride in workmanship. They destroy teamwork by promoting competition for limited resources, foster mediocrity because objectives are usually driven by numbers and what the boss wants rather than by quality, focus on the short term and discourages risk taking, and confound the “people resources” with other resources. If all individuals are working within a system, then they should not be singled out of the system to be ranked. Addressing the design of the system will improve performance, but requires knowledge, skills, and enthusiasm of all people to be achieved most effectively.
- 13. Encourage Education and Self-Improvement** – Organizations must invest in their employees at all levels to ensure success in the long term. A fundamental mission of business is to provide jobs as stated in Point 1, but business and society also have the

responsibility to improve the value of the individual. Developing the worth of the individual is a powerful motivation method. Encouraging education and self-improvement is developing people's ability to take on new knowledge and skills, to "learn to learn".

**14. Take Action** – Any cultural change begins with top management and includes everyone. Changing an organizational cultural generally meets with skepticism and resistance that many firms find difficult to deal with, particularly when those that should be eliminated are deeply ingrained in the organization's culture. A systematic approach is needed in top management that builds development and learning throughout the entire organization. Achieving improvement in process performance requires a method.

**15. How do companies that do not apply for the award commonly use the Baldrige Award criteria?**

Companies use the Baldrige Criteria in different ways-for self-assessment or internal recognition programs, even if they do not intend to apply for the award. The benefits of using the criteria for self-assessment include accelerating improvement efforts, energizing employees, and learning from feedback-particularly if external examiners are involved. Using the award criteria as a self-assessment tool provides an objective framework, sets a high standard, and compares units that have different systems or organizations. Although the approaches used for self-assessment may vary, self-assessment is the common reason for using the criteria by companies that do not apply for the award.

**19. List the reasons companies pursue ISO 9000 registration. What benefits can registration provide?**

Organizations certified under the ISO 9000 standard are assured to have quality equal to their peers. In some foreign markets, companies will not buy from suppliers who are not certified to the ISO 9000 standards. Often, ISO certification is necessary to obtain product certification and meeting these standards is becoming a requirement for international competitiveness. Benefits of ISO 9000 registration include higher customer satisfaction, retention to better quality products, improved productivity, decreased costs, increased use of data as a business management tool, increased management commitment, more efficient management reviews, and improved customer communication. Some companies have reported increased on-time delivery, decreased cycle time, reduced number of test procedures, and reduced defects.

**20. Why has ISO 9000 been controversial? How has the 2000 revision addressed some of the controversial issues?**

The original standards and the 1994 revision met with considerable controversy. The standards only required that the organization have a documented, verifiable process in place to ensure that it consistently produces what it says it will produce. A company could comply with the

standards and still produce a poor-quality product-as long as it did so consistently. Many never used the standards to drive improvement. Dissatisfaction with ISO 9000 resulted in the European Union calling for deemphasizing ISO 9000 registration, citing the fact that companies were more concerned with “passing a test” than on focusing their energies on quality processes. ISO 9000:2000 is a response to the widespread dissatisfaction that resulted from the old standards. The new standards have a completely new structure, based on eight principles-“comprehensive and fundamental rules or beliefs for leading and operating an organization” that reflect the basic principles of total quality and many of the core values and concepts of the Baldrige and European Quality Award criteria. With this underlying philosophy, the 2000 revision aligns much closer to the performance excellence concept of Baldrige. Organizations now need a process to determine customer needs and expectations, translate them into internal requirements, and measure customer satisfaction and dissatisfaction. Managers must communicate the importance of meeting customer and regulatory requirements, integrate ISO 9000 into business plans, set measurable objectives, and conduct management reviews. No longer can top management delegate the program to people lower in the organization. Organizations must now view work as a process and manage a system of interrelated processes. This approach is significantly different from the “document what you do” requirements of earlier versions. Analysis now needs to be done to provide information about customer satisfaction and dissatisfaction, products, and processes with the focus on improvement. Evaluation of training effectiveness and making personnel aware of the importance of their activities in meeting quality objectives are stressed. In the previous standards, organizations were required to perform corrective and preventive action but now must have a planned process for improvement.

**22. What are the similarities and differences among Six Sigma, ISO 9000, and the Baldrige approaches? (See also the bonus material for this chapter.)**

Each of these frameworks is similar in that they are process-focused, data-based, and management-led. However, each offers a different emphasis in helping organizations improve performance and increase customer satisfaction. Baldrige focuses on performance excellence for the entire organization in and overall management framework, identifying and tracking important organizational results. ISO focuses on product and service conformity for guaranteeing equity in the marketplace and concentrates on fixing quality system problems and product and service conformities. Six Sigma concentrates on measuring product quality and driving process improvement and cost savings throughout the organization. The 2000 revision of ISO incorporated many of the Baldrige criteria’s original principles but it provides more detailed guidance on process and product control than Baldrige, and it provides systematic approaches to many of the Baldrige criteria requirements in the Process Management category. Implementing Six Sigma fulfills in part many of the elements of ISO 9000:2000, including the

Quality Management System, Resource Management, Product Revitalization, and Measurement, Analysis, and improvement commitment through periodic review of Six Sigma Helps to demonstrate managing champions to sponsor project, providing training resources, and communicating progress and achievements.

## Discussion Questions

**1. Melissa Clare works for a software company as a technical support representative. Her duties include answering the telephone, providing information to customers, and troubleshooting technical problems. Her supervisor told her to be courteous and not to rush callers. However, the supervisor also told her that she must answer an average of 15 calls per hour so that the department's account manager can meet its budget. Melissa comes home each day frustrated because the computer is slow in delivering information that she needs and sometimes provides the wrong information so she has to search for it in complex manuals. She knows that she often cuts the call off prematurely or provides only the minimal information necessary. What is Mellissa's job (not her job description)? What might Deming say about this situation? Drawing on Deming's principles, outline a plan to improve this situation.**

After reading this, I would have to say that Melissa's job title should be "Super-Tech-Rep", to say the least! After all, she has been told not to rush callers, but must complete 15 calls per hour, which means that she can only apply four minutes to each call to achieve this quota. Four minutes per call alone defeats the purpose of "not rushing the caller". On top of that, her computer is so slow that she must research complex manuals to find correct answers, which is a task that I am sure takes more than four minutes itself. Completing 15 calls per hour, with an allotted time of four minutes for each call, while not rushing the caller is absolutely impossible. No wonder Melissa is frustrated. To accomplish what her employer expects, she would have to be a super hero with magical powers. I think Deming would say that it is time for this company to regroup totally! I think he would also tell them that it is time to create a customer-driven focus aimed at improving processes by implementing a system, while bringing the company up-to-date with sufficient technology. So, drawing on Deming's principles, the following outline of steps could (I mean "should") be used to improve Melissa's situation. Of course more could be added to this list.

1. Create a system in which components work together effectively and efficiently. In this case, the function of Melissa's job and the job of the department's account manager need to be aligned in terms of optimizing there interactions.
2. The account manager and the boss must realize that Melissa is their (internal) customer and provide her with the means and resources necessary to perform her job effectively. The account manager cannot fulfill her job requirements if Melissa cannot fulfill hers.

3. Improvements in technology, process design, and training, can reduce the variation in Melissa's performance. New, up-to-date, and faster computers are a good start, in terms of Melissa's job. Lack of resources makes it hard for Melissa to do her job. Even still, 15 calls per hour seem hard even if these things are improved. Maybe the account manager should step up to the plate, or maybe the boss should hire an additional support representative.
4. This company should also stop making decisions based on cost, which seems to be the case regarding the 15 calls per hour to meet their quota. If callers are not receiving the information needed to fix their problems, this company is soon to have no customers, which means their set quota will not possibly be met.
5. This company must eliminate numeric quotas and management by objective. Setting the numeric goal of making 15 calls per hour for Melissa, without incorporating a method to help her achieve this goal, is the reason for her frustration and possible resentment of her job.
6. Surely Melissa fears going to work. This company needs to take action in constant improvement of all processes, while fostering teamwork, so Melissa and other employees will enjoy coming to work.

**5. Think of a system of which you are familiar, such as your college, fraternity, or a student organization. What is the purpose of that system? What would it mean to optimize that system?**

While I do attend a college (Kent), I am not familiar with all the processes that pertain to Kent's system other than the admissions process, which I am sure involves many departments. I am not a member of a fraternity or student organization. When thinking of a system I might be familiar with, I would have to use the system of the temporary staffing agency I worked for in the past. I have worked for myself over the past five to six years, and while I have my own system for how I do my job, it includes only one person and that is me. Using the temporary staffing agency as an example would be more appropriate since this system involved departments as well as more than one office. However, the part of the system I am going to talk about is the sales department. The name of this company is Alliance Temporary Staffing (ATS). Of the five offices that made up ATS, four were within a 25 mile radius of each other. Therefore, these offices had to report operations to each other, especially one which was the corporate office. The fifth office was located in Dayton Ohio, so that office only had to report to the corporate office. ATS services companies of all types by helping them gain employees because they either don't have time or trouble doing so on their own, among other reasons. The system at ATS started with a sales representative who would visit companies door-to-door in hopes of speaking with an HR manager to explain what our services were and how we could assist them. Sometimes the sales rep was able to talk to someone, other times they were looked at as unwanted solicitors. Either way, if the sales rep did not get to talk to an HR

manager, they were required to obtain the name of the receptionist, who was the first person they encountered when walking through the front door. Having this name ensured a contact person that the sales rep could use when following up with cold calls. The corporate manager always insisted on going back to the company for as many visits as it took to gain them as a client. Also, the sales rep was required to make follow up calls as much as possible. This area of the system needed improved dramatically in my opinion. For one thing, people (businesses) do not like being hounded! Another point to stress is that they also do not like to be bothered with solicitors during certain days of the week. For example, most people dread Mondays because they are the beginning of the work week. Managers are more concerned with what will transpire within their own company throughout the rest of the week. I have found that visiting companies on a Thursday or Friday to be much better because managers are in much better moods during these days since it is the end of the week. Another task of the sales reps were to report to each other among the four offices, which companies they were working on so that two reps wouldn't visit the same company. This made perfect sense not only in terms of companies looking at us as if were lacking communication between offices, but also because it would not be fair for a sales rep to land a company that another sales rep had been working on for a year. Once client companies were obtained that wanted to make use of our services, the four offices would communicate client company employee requests. We called these job orders. Since our four offices were within 25 miles of each other, it was possible that a particular office would have more luck in filling those orders than another office. So, Obtaining clients was the function of the sales team, filling the job orders requested by the client companies was the job of all office managers, the billing and payroll department was responsible for billing client companies based on how many employees were placed in that company and the total hours they worked (since they were on our payroll and client companies reimbursed us for the salaries plus our charge). The billing and payroll department was also in charge of generating the paychecks for employees placed in client companies, as well as generating paychecks, commission checks, and commission checks for our own employees. Office managers conducted interviews and maintained an employee database of all those who had applied for a job through our company whether we found them on or not. When a job need filled, the office manager would search the database for any candidate who might fit the job description and then call that candidate to see if they were still available for work and if so, interested in the job we had for them. Although teamwork was a part of our company's system, areas of it could have been improved. We did have company meetings, and were good at communicating among all offices. However, the corporate manager was always on a power trip. She talked down to all workers, and could be seen many times, standing above them with her arms crossed, tapping her foot and saying, "You know I'm your boss don't you?"

**7. Suggest ways that management can recognize the existence of fear in an organization. What strategies might managers use to deal with and eliminate fear?**



A good indication that fear exists in an organization is the lack of respect among managers and workers. Whenever fear exists in the workplace, people will develop defense mechanisms for survival. This further decreases productivity, because people work first for survival based on how they are judged. Then they give their next efforts to accomplishing their work objectives. Strategies to deal with and eliminate fear within an organization can be achieved with a transition of leadership and a change in corporate policies. Also, managers need to be sensitive to the impact that fear can have on their organization. Management can decrease fear by providing open communication and resources to enable workers to develop to their potential. Management must remove the barriers of fear of suggesting new ideas, being punished for missteps when learning new skills and for making mistakes in one's work when they have not been trained adequately. Also, teamwork, empowering all employees, and motivation should be implemented as well.

## Projects

**6. Does your state have a quality award program? If so, obtain some current information about the program and report on it. If not, contact your state representative to see why or why not.**

Yes, the State of Ohio does have a quality award program. The Ohio Partnership for Excellence manages the Ohio Award for Excellence Program. This program offers organizations in all sectors the opportunity to receive varying levels of Feedback Reports and an evaluation of their achievement of success as compared to the Baldrige Criteria. Specific criteria are available for business, education, government, health care and non-profit organizations. The program is divided into two components, with multiple levels appropriate for your organization. The first program is "Start the Journey." With OPE, you can begin using the criteria at one of three levels. The entrance level will be assessed by OPE, in collaboration with your organization. The decision is primarily based on knowledge of the Baldrige criteria, whether an Organizational Profile has been written, whether an employee survey has been conducted, and other factors. The intent of OPE is to "meet you" wherever you are in your journey, and help you progress as effectively and efficiently as possible. OPE assists organizations to understand the Baldrige Criteria and assist leadership teams to begin their Journey to Performance Excellence and make a long-term commitment to continuous improvement. The second program is the Full Application Program and follows the full criteria. Organizations of any sector or size may apply by submission of a Full Application that is responsive to all elements of the criteria. The requirements for application are outlined in a special publication, which can be downloaded from the [Ohio Partnership for Excellence](#) website along with the Criteria. This program has an annual cycle with specific deadlines. Applicants receive a site visit, feedback report from the team of examiners and recognition from a panel of judges. This level is focused on providing a complete feedback report to all Applicants and recognizing their performance relative to the

Criteria. It is not competitive between Applicants, your only competition as an Applicant are your own challenges on your Journey to Performance.