

INSTRUCTOR'S NOTES TO ACCOMPANY
QUALITY AND PERFORMANCE EXCELLENCE: MANAGEMENT,
ORGANIZATION AND STRATEGY, Eighth Edition

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These notes are intended to provide guidance for discussion of the questions and cases at the end of the chapters. Most questions have been purposely designed to be open-ended, so there is no one correct answer. Rather, their purpose is to stimulate discussion and make the concepts of total quality more personal to the student. Other questions are designed to ensure that students have grasped the basic concepts in the chapter and are basically review in nature.

Chapter 1: Introduction

Discussion Questions and Experiential Exercises

- 1. Describe how the specific practices of PVHS in the opening Performance Excellence Profile support the principles of TQ.**

Students should link their answers to Table 1.1.

Customer Focus: diversified services; listening to customers to improve ER layout and patient rooms; Getwell Network

Leadership: high-performance culture; communication mechanisms

Involvement of People: interdisciplinary teams; open door policy

Process Approach: innovative systems and technologies

System Approach to Management: mission – to remain independent while providing innovative, comprehensive care of the highest quality, and exceeding customer expectations; vision – to provide world-class health care

Continual Improvement: performance improvement system called Global Path to Success; action plans to address performance issues; innovation strategies

Factual Approach to Decision Making: Balanced Scorecard system; Meditech Information System

Mutually Beneficial Supplier Relationships: partnering relationships

- 2. Explain why quality became the most important issue facing American business in the 1980s. In addition to economic competition from Japan, what other factors may have contributed to the importance that quality has assumed?**

Quality became an important business issue because of the fall of American competitiveness in world markets, and particularly, the economic competition from Japan and other Asian countries. During the preceding decades, American manufacturers focused more on quantity of output rather than quality. As the rate of quality improvement in Japan was faster than that in America, the overall quality of goods produced in Japan exceeded those produced in the U.S. sometime during the 1970s. Other factors include increasingly quality-conscious consumers, rapid advances in technology that required better attention to quality, and growing realization that managers were focused on the wrong goals and objectives.

- 3. Examine the annual reports of one company over a period of years. Summarize how quality is discussed or implied in the company's statements and philosophy. Are any changes in the perspectives of quality evident over time?**

Most annual reports will make reference to customers, improvement initiatives, and so on, particularly in their mission statements. Many address quality issues directly. Of course, this was more prevalent in the 1990s and early 2000s; however, many aspects of quality, particularly those in Table 1.1 are often evident. Here is one summary of John Deere & Co. Instructors might use this for discussion prior to assigning this question and provide it as a

template for students to follow.

- In 1999, the themes of continuous improvement, profitable growth, and business innovation continued to be dominant. The continuous improvement area featured six sigma quality goals for performance and customer satisfaction. It was mentioned that during the year some 900 projects involving several thousand employees had been carried out. These six sigma projects had the objectives of streamlining business processes, focusing on customers, and structuring around core processes.
- In 2005, Deere employees were aligned with business objectives and evaluated and compensated accordingly. Most salaried employees worldwide followed detailed, tailored performance plans that spelled out how each individual's efforts contribute to meeting unit and company goals. Also stewardship of the environment was emphasized, pointing to how the company developed product solutions that were less disruptive to the surrounding environment, such as the John Deere 2500 E greens mower that uses hybrid technology, resulting in lower noise, better fuel efficiency, and plenty of power (18-hp); the Tier 3-compliant PowerTech Plus engines using the latest technology to deliver better fuel economy and more power while meeting stringent emissions regulations; and becoming the first equipment manufacturer to use biodiesel as a factory fill at its U.S. manufacturing locations.
- In 2008, Deere emphasized four key approaches: rigorous processes, the Deere Product Quality System, corporate responsibility, and an emphasis on a performance-based work culture. Following rigorous processes everywhere helped Deere address the growing scope and scale of operations and achieve increased levels of consistency, simplicity, efficiency and quality. Many of their approaches were unique to Deere and hard to copy. Concurrently, the company implemented the Deere Product Quality System (DPQS), a set of world-class manufacturing practices designed to meet rising customer expectations for increased product reliability. Product lines responsible for most of the company's sales received advanced quality certification through 2008. Deere affirmed that it takes its responsibilities seriously. This included continuing to set employee safety as one of John Deere's top priorities, and endeavoring to treat the environment with increasing care, by making sustainability an integral part of its operations. Their biomass energy system went into operation during the year at their German combine factory. Further in 2008, Deere announced plans to reduce greenhouse gas emissions from its global operations as part of participation in the U.S. Environmental Protection Agency's Climate Leaders program. Finally, John Deere established a performance-based culture that features a employee teaming and collaboration, promotes a global and inclusive work environment, and helps the company strengthen its competitive advantage through the attraction and retention of highly talented employees from all backgrounds.
- In 2010, Deere took a more strategic business focus. Their strategy concentrated on two growth areas – agricultural and construction equipment solutions. Other operations – turf, forestry, parts, engines, intelligent solutions, and financial services – were said to have vital roles supporting or complementing the growth operations.

Deere's lineup of tightly knit operations were designed to leverage strengths, optimize investments, efficiently target leadership and employee resources, and extend its ability to compete in the global marketplace. The company set goals that would result in a near-doubling of sales, a healthy increase in profitability, and an almost three-fold increase in economic profit, or SVA, by 2018. The strategic plan targets roughly half of the company's sales coming from outside the U.S. and Canada by 2018, versus about one-third in 2010. Financial performance measures were implemented to ensure that results would be sustainable as growth was being accelerated. Business "health" metrics were developed, pertaining to product quality, market share and employee engagement, among other areas.

- In 2012, Deere continued their strategic business focus theme.

These summaries definitely show an increasing commitment to TQ concepts. The early use of TQ concepts was actually started when Deere began to focus on TQ concept in the 1990's. Management has continually emphasized productivity and cost reduction as the key to excellence. In the mature and very competitive heavy equipment industry, the changing focus on human resource practices and stewardship of the environment in 2008, 2010, and 2012 signaled that cost reduction, quality improvement and "value to the customer" may be defined in a different way that will convey an updated image to the average buyer. Also, there seems to be increasing and sustained interest in promoting and supporting citizenship efforts, which is sometimes called corporate social responsibility. For the latest Deere annual report, go to: <http://www.deere.com>.

4. Conduct some research on quality practices that is focused on a particular country or global region. Summarize your findings in a two- to three-page report.

Quality has become central to many countries and regions around the world. For example, the European region has its own version of the Baldrige Award, the European Foundation for Quality Management; European countries also use ISO 9000 extensively. Much can be found about China and other emerging and developing companies. What students should discover are the challenges or benefits that many countries face in regards to quality, and possibly some differences in culture that make their quality efforts different from those in the U.S.

5. Cite several examples in your own experience in which your expectations were met, exceeded, or not met in purchasing goods or services. How did you regard the company after your experience?

Everyone has had such experiences. Getting students to share these provides a better sense of how consumers define quality. This question can be used to develop and discuss alternative viewpoints and definitions of quality.

6. How might the definition of quality apply to your college or university? Provide examples of who some customers are and how their expectations can be met or

exceeded.

Schools are ripe for quality improvement. Students and faculty have many examples. It is also important to note that viewpoints differ at different levels; for example, in the classroom, within a specific college, an in the university as a whole. Much controversy exists about who are the customers of a school. This discussion leads easily to conflicting needs and objectives and raises questions about how customers' needs can be satisfied. You might wish to investigate Baldrige education winners. Application summaries are generally available on Baldrige winners' web sites. Start at www.nist.gov/baldrige and click the link for Award Recipients.

- 7. High quality is not necessarily related to price. Discuss this, drawing from your own knowledge and experience, and provide examples where this may and may not be true. High quality is not necessarily related to price. Discuss this, drawing from your own knowledge and experience, and provide examples where this may and may not be true.**

Most people, whether rich or poor, exhibit some sense of being value-conscious in defining quality. They look for bargains where they can get more, and/or spend less, than they had expected for a similar good or service. Thus they want to obtain the “biggest bang for their buck,” whether buying a luxury SUV or an economy sub-compact car. Either or both of those can be bargains if they are designed and built with quality, have the features that the customers are looking for, are priced competitively, and are fit for intended use. Students can and should be able to cite situations in which they have found a quality product at a bargain price, and situations in which they did NOT receive a bargain, despite a very low or very high cost of the product. However, researchers have found that one cannot determine quality from price alone. One can find very good wines, for example, at a low price point. Other examples, are store-branded merchandise compared with national brands.

- 8. Discuss how the frequency with which you anticipate using a product might impact the quality and price that you are willing to pay and how it relates to the value-based definition. Provide some examples to justify your reasoning.**

The more that one uses a product might influence one to pay higher prices for higher quality, thinking in terms of total cost of ownership and long term durability and reliability. Thus one might place higher value on a product that has more reliability. Similarly, one might not purchase the highest quality product that one might use infrequently. A simple example is a step ladder. A homeowner who might use one only a few times a year might not purchase a high price, high quality ladder, whereas a contractor that would use one on a daily basis might. Students should be able to suggest some relevant examples.

- 9. What implications do you think the forces that will influence the future of quality (see the box “What Will Influence the Future of Quality” in the chapter) will have on management practice?**

Students should try to develop ideas on how these trends will change management behavior;

for example, how social media is changing the way that quality influences organizational management. As another example, global responsibility and environmental concerns are reflected by the current focus on sustainability and environmental protection; students can discuss issues of global warming as it relates to process design, recyclability as it relates to product design, and so on. A good exercise would be to ask students to create a matrix where the rows are the forces and columns are functional management decision areas such as OM (perhaps broken down by product/service design, supply chains, etc.), marketing, finance, and so on, and to identify management practices that might be changed as a result of these factors.

10. How has social media changed how both consumers and organizations deal with quality? How can organizations exploit social media in their quality approaches and decisions?

The ability to rapidly exchange and share opinions makes it easier for consumers to identify both good and poor goods and services (e.g. the United Breaks Guitars example). A quick search on a smart phone can change a potential purchase to a lost customer. Organizations can also “mine” an immense amount of data and learn about customer behaviors, likes, and dislikes quite easily.

11. Think of a product with which you are familiar. Describe the eight “multiple quality dimensions” (e.g, performance, features, and so on) for this product that are listed in this chapter.

This question is designed to get students to think about the different dimensions. The results can be used to prioritize needs (as a good lead-in to QFD or the development of customer survey questionnaires, for instance).

12. What might the eight “multiple quality dimensions” mean for a college or university? For a classroom?

This enables students to apply the concepts to something they all know about and in which they have a vested interest. A key issue is what are the "products" and services a school provides.

13. Explain the differences between manufacturing and service organizations and their implications for quality.

Most students would probably have seen this in an introductory operations management course. These differences include higher labor intensity, immediate consumption and lack of storage of the "product," generally a higher degree of customization, a large volume of transactions, time sensitivity, and an increased reliance on the human element. The quality dimensions important to customers are different; thus, quality efforts are also different. Key issues are described in the chapter in the Quality in Services section.

14. A car rental agency surveys its customers on the following characteristics:

- Cleanliness of the rental facility
 - Courtesy of staff
 - Efficiency of vehicle pickup/return
 - Cleanliness of vehicle
 - Professionalism of staff in explaining the contract and options
- How would you classify each of these according to the five key service quality dimensions? What dimensions are missing?**

- Cleanliness of the rental facility - tangibles
- Courtesy of staff - assurance
- Efficiency of vehicle pickup/return - reliability
- Cleanliness of vehicle - reliability
- Professionalism of staff in explaining the contract and options - assurance

None of these dimensions address empathy or responsiveness.

15. Describe the key principles of total quality.

Students should be able to list and explain the concepts in Table 1.1.

16. How might you apply the concepts of TQ to your personal life? Consider your relations with others and your daily activities such as being a student, belonging to a fraternity or professional organization, and so on.

Students should consider issues such as Who is my customer? How do I plan to be a "quality person"? What do I do to continuously improve? (Good examples include class preparation and interpersonal relations.) The instructor may wish to consult some of the writings of Harry Roberts, such as "Using Personal Quality Checklists" in *Quality Progress*, June 1993, p. 51, or Harry Forsha, *The Pursuit of Quality Through Personal Change*, Milwaukee: American Society for Quality Control, 1992. Many articles in *Quality Progress* over the last few years have dealt with these issues. ASQ has a nice search engine. Go to www.asq.org and select the Publications link.

17. Why is a customer focus a critical element of a high-performing organization?

Customers are the judges of quality. No customers, no sales, no jobs. Simple idea, but awfully difficult for many organizations to see and implement.

18. Make a list of your personal "customers." What steps might you take to understand their needs and build customer engagement?

This question is designed to make quality more personal -- parents, spouses, roommates, teachers, etc. The instructor might try to relate these personal issues to those of a company like Coca-Cola.

19. Cite an example in which you did not purchase a product or service because it lacked "dissatisfiers" as defined in the chapter. Cite another example in which you

received some “exciters/delighters” that you did not expect.

This question is similar to #3, but focused on products. It will help elicit key dimensions that customers want and help students realize the necessity of both meeting customer expectations and trying to anticipate and exceed them. The instructor might comment that one of the goals of the course is to transform students into "customers from hell."

20. In what ways might the lack of top management leadership in a quality effort hinder or destroy it?

Top management has the ultimate responsibility for instilling quality among their employees. Role models are powerful influences. All talk and no action can easily kill a quality program. These issues are discussed in the Strategic Planning and Leadership subsection.

21. Explain the various areas within an organization in which continuous improvement and learning may take place.

Everywhere! Product design, manufacturing, engineering support, sales, etc. It is easy to establish the importance of every activity in a company in meeting both internal and external customer needs. No activity is immune to continuous improvement, and the students should be encouraged to provide many examples.

22. Why is measurement important in an organization pursuing performance excellence?

Problem solving should be based on objective data and facts. Measures are needed to understand the problems and opportunities for improvement and for monitoring progress. Many executives have stated that "you can't manage what you can't measure," although Deming rejects this statement, stating that "the most important figures are unknown or unknowable." These two points of view can be made as a basis for class discussion and debate.

23. Examine some process with which you are familiar. Make a list of ways that the process can be measured and improved. What difficulties might you face in implementing these ideas?

Students should be encouraged to select simple processes with which they are very familiar and understand well. This question can lead to how to describe a process (see Chapter 3 on tools). Key issues that should be addressed are what measurements to take. Many organizations fail in this regard, taking unnecessary measurements that are useless for decision making, or failing to take critical measurements that address customer needs. One way of approaching this is by a QFD-type matrix, listing customer needs on the rows and measurements on the columns. An assessment of how well the measures address customer needs will allow you to choose the right ones or determine if any important ones are missing.

24. Describe the three ways of viewing teamwork.

Vertical, horizontal, and inter-organizational. See discussion in the Empowerment and Teamwork subsection.

25. Describe some possible ways in which vertical, horizontal, and inter-organizational teamwork can be applied at a college or university.

This will help students better understand the differences among the three types. How much teamwork in a university involves its customers and suppliers, or cuts across colleges and departments, or engages two-year as well as four-year programs? If your school is typical, the answer is probably obvious. It is easy to brainstorm many opportunities.

26. What is employee engagement? How does it differ from empowerment? How might an employee really know that he or she is truly empowered? How might an organization know that employees are truly engaged?

Employee engagement simply means that workers have a strong emotional bond to their organization, are actively involved in and committed to their work, feel that their jobs are important, know that their opinions and ideas have value, and often go beyond their immediate job responsibilities for the good of the organization. Empowerment is giving people the authority and responsibility to make decisions that affect the welfare of their customers. Indicators of empowerment include the freedom to take risks, lack of bureaucratic red tape, management actions and defense of employee decisions, management through leadership instead of control, financial support, etc. Engagement is manifest in doing things without being asked or directed, volunteering suggestions for improvement, willingly helping co-workers, and so on.

27. Have you ever felt restricted in your work because of a lack of empowerment? Can you cite any experiences in which you noticed a lack of empowerment in a person who was serving you? Why is this such a difficult concept to implement in organizations?

Most students have had this experience, particularly in part-time or summer jobs. How about as a student? How much empowerment do instructors typically give students? (How much do *you*?) Inhibitors include a lack of trust, fear of relinquishing control, and the reward system itself.

28. How does TQ differ from agency theory?

As discussed in the section in the chapter, agency theory takes a rather sterile approach to organizational theory and removes people from the system. Differences include how people are motivated, alignment of goals, sharing information, time perspective, risk taking, and role of leadership. We have never heard a top executive – especially from Baldrige winning organizations – state that people are *not* the key to their success. Indeed, what we have observed is simply that successful organizations go to great lengths to treat their employees as valued people.

29. Explain the mechanistic, organismic, and cultural models of organizations, and how TQ is similar to or different from them.

See Table 1.2 and its associated discussion for a summary of the differences and similarities.

30. Today, both manufacturing and service depend greatly on information technology and the Internet. What would be some ways of evaluating the quality of a Web site?

Content that is intuitive and understandable, accurate, and current. This means that the design of the site must meet the customers' requirements, not the company's. The web site must be easy to navigate and locate information (such as ways to contact the company!). If customers misinterpret information and make a wrong purchase, expect returned products and non-returning customers. Product offerings and price data change quickly, and need to be kept accurate and current. One of the author's unfortunate experiences involved purchasing an accessory listed as compatible with a PDA only to find out that it didn't work, leading to wasted time getting a return authorization, repackaging, and returning the product (the Web site was corrected a few weeks later). Technical issues might include the speed and reliability of the web site, as reflected by page loading rates, and the number of clicks required to navigate through the site, and server uptime/downtime.

CASES

The Reservation Nightmare

1. Summarize the service failures associated with this experience.

Basically, everything the company did was a service failure, from the complexity of the menu, excessive wait time, repeating the 19-digit customer service number, and transfer to another operator without response.

2. What might the travel agency have done to guarantee a better service experience for Mr. Harrington? How do your suggestions relate to the TQ principles?

Students usually identify numerous improvements including simplifying the messaging system, better staffing, cross-training operators, and so on. The company needs to better understand customer requirements (How long of a wait is acceptable? How complex system do customers tolerate?), improve its processes (eliminate redundancy, tie the 19-digit input to the operator's computer), use data better (determine how many customers use each feature, for example), and empower and train employees to be able to answer a wider variety of questions.

Nashville Custom Guitars

Based on this tour of NCG, can you identify how the operations and quality practices reflect the principles of TQ?

- (1) customer and stakeholder focus – attention to detail and perfect tone; hand-making necks to customer specifications; adjustments to optimize feel and playability
- (2) a process orientation supported by continuous improvement and learning – manufacturing layout and inspection activities; detailed process requirements (such as humidity control and use of CNC machining for critical dimensionality)
- (3) employee engagement and teamwork – small staff of experienced and empowered luthiers who provide personal attention and hand-crafting of the guitars; recruiting luthiers who want to work in a team environment and have a passion for guitar making; encouraging workers to enhance their skills
- (4) management by fact – luthiers recording what they did while building tops and using the records to duplicate outstanding results
- (5) a strategic focus on quality as a source of competitive advantage – small scale operation with a focus on high quality; web page where owners can ask questions
- (6) visionary leadership that views performance excellence as an integrated system – lack of a formal quality department so that quality is understood to be everyone's job; encouraging training and even encouraging workers to open their own businesses.

Bishop's Seafood (Note: this case also appears in Chapter 6; instructors may wish to use it in the context of this chapter instead.)

1. Why do you think the restaurant went to such lengths in response to Sandy's call?

The restaurant went to great lengths in response to Sandy's call because the last thing that a high quality restaurant wants is any hint of food contamination. This is the prime source of such a restaurant's reputation. Customer satisfaction, loyalty, and word-of-mouth advertising depend on the quality of their food.

2. How does this experience illustrate the five customer service dimensions: tangibles, reliability, responsiveness, assurance, and empathy?

This experience illustrates the five customer service dimensions: tangibles, reliability, responsiveness, assurance, and empathy? Tangibles were shown in where the hostess seated the family. Reliability was shown in taking care to refill water glasses, bringing the dishes for the meal out at one time, and later follow-up from the corporate office representative. Responsiveness and empathy seemed to go hand-in-hand as the needs of the children were met in the ordering part of the process, and when the meal was taken back for warming on behalf of the friend who was arriving late. Assurance was shown by the fact that management sent a food inspector to ensure that there was no health problem present at the restaurant. The

unexpected sending of the \$200 gift certificate seemed to illustrate all of the customer service dimensions in one.

Patterson Auto Sales and Service

Drawing upon the principles of TQ and the unique nature of services, describe some of the issues that Bill must consider in achieving his vision. Develop a list of action plans that he might consider.

Bill should examine each of the quality management principles in Table 1.1 and consider their implications in the business. He must also consider the differences between service and manufacturing:

- Customer needs and performance standards are often difficult to identify and measure in services, primarily because the customers define what they are and each customer is different.
- The production of services usually requires a higher degree of customization, so employees must tailor their services to individual customers
- The output of many service systems is intangible, so service quality can only be assessed against customers' subjective, nebulous expectations and past experiences. (What is a "good" sales experience?)
- Services are produced and consumed simultaneously, and many services must be performed at the convenience of the customer. Attention must be paid to training and building quality into the service as a means of quality assurance.
- Customers often are involved in the service process and are present while it is being performed, or at least, in specifying their problems and needs prior to work being done on their car.
- Services are generally labor intensive, and the quality of human interaction is a vital factor for services that involve human contact. Thus, the behavior and morale of service employees is critical in delivering a quality service experience.
- Many service organizations must handle large numbers of customer transactions. Such large volumes increase the opportunity for error.

Action plans that Bill might consider developing must tailor the systems to the needs of various types of customers. He must ensure that he develops appropriate infrastructure, practices and tools to support his vision. For example, car buyers have different needs from those who are coming in for shop service to their cars. For car buyers to be able to obtain a wide range of vehicles and options to evaluate, have access to available salespeople, enjoy a prompt greeting, and feel comfortable and un-pressured in reaching a buying decision, Bill must plan on exercising leadership and strategic planning to develop the required infrastructure. Because customers expect salespeople to be courteous, to be knowledgeable about the cars, to respect their time, and to honor verbal promises, courteous salespeople must be hired and trained to support customer relationship management, develop good processes, and work to improve systems through information and knowledge management.

For repair and maintenance service, customers want to have the work explained

appropriately, to be fully informed of any additional necessary work, and to have all work reviewed on completion. They want good time estimates and communications with the service department. Thus repair service people must not only be technically proficient, but also be customer focused, and understand and support the need for continuous improvement through information and knowledge management.

He should use the “effective practices” that are described for each principle in this chapter and apply them to his business.